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AUSTRALIA
1925

YATES'

SPRING SOWERS' BOOK

1925



Yates'
Waikato Mammoth
Pumpkin



Yates' Colonial Cowgrass



Yates' Re-machined Algerian Oats

Yates' Sel. Marlborough Lucerne



Yates' Colonial Red Clover

YATES'
RELIABLE
SEEDS

RESULTS ARE CERTAIN

YATES'
RELIABLE
SEEDS

Our Terms

PRICES.—Enclosed with this book is our current price list, giving our prices for everything in season with the exception of our grass seed prices, which are given on page 17. These price list folders are posted free to you monthly and should serve to keep you conversant with market values; if you are not getting them please advise us.

Make Certain of Buying Right.—We will be pleased to book your order now at these prices, subject to you cancelling if you do not want later on. We will also give you the benefit of having your whole order invoiced at our present prices or our prices at time of delivery, whichever are lowest, provided we have your order in hand before prices alter. By this system you have everything to gain and nothing to lose. Booking early benefits us in that we can arrange supplies ahead.

DELIVERY.—All Grass and Clover Seeds over the value of £2 are quoted free on board rail or steamer, Auckland; but we pay freight to the nearest direct station or port. Manures, Grain, etc., are quoted as usual f.o.r. or f.o.b., Auckland.

DISCOUNTS.—**SPECIAL NETT PRICES FOR CASH WITH ORDER** or before goods are shipped, or 10% discount off booked prices for cash in 10 days from date of invoice, or 7½% discount off booked prices for cash in 20 days from date of invoice, or 5% discount off booked prices for cash in one month from date of invoice, otherwise due nett in three months. 9% interest is charged on all overdue accounts.

BLANK CHEQUES.—Many farmers post us blank cheques to fill in when they do not know the exact cost of the goods, freight, sacks, etc. This enables them to take advantage of our low "Cash with Order" prices. It is quite safe from your point of view if you cross out the word "Bearer," and write across the cheque "Not Negotiable," and at the bottom "Under Twenty Pounds," or whatever sum you think will roughly cover the cost of the goods, freight, sacks, etc. This stops the cheque being misused if it goes astray, which is very unlikely.

Special to Unknown Correspondents.—With orders from those with whom we have not had the pleasure of previous business transactions, we naturally expect to receive either cash with the order or a satisfactory Auckland business reference. We dislike having to draw the attention of new customers to this reasonable business method, and would respectfully ask your observance of it so as to avoid any delay in the execution of the order.

Large Quantities.—In trying to still further reduce the cost of selling and delivering to our customers, we are brought in touch with a well-known commercial fact, that it costs almost the same to make up, consign, invoice and put through the books **any order**, whether large or small. This means that the expenses per pound or bushel are less for larger quantities. We have adopted the system of lower prices for larger quantities—it would not be fair to large buyers if we did not allow them the saving in costs which is rightly theirs.

When Ordering, be sure to plainly sign your name, and give both postal and consignment addresses where these differ, as this lessens the risk of mistakes and of goods going astray. By writing out your order on the Order Form sent with this Catalogue, you will greatly facilitate our work.

Execution of Orders.—All orders, if not sent by return steamer or rail, are promptly acknowledged by us. Should particulars of consignment or acknowledgment of order not be received by return mail, please write repeating such order in case letter has miscarried or arrived without signature or address of sender. All orders, whether large or small, receive our most careful and prompt attention.

Arthur Yates & Co., Ltd.
Albert Street, Auckland

A Live Question.



A contented and well fed herd is a heavy producing one.

AT the present moment the advocates of Herd Testing are well to the fore; we all agree that Herd Testing is a very good thing, but in our opinion many are going in for it who would be better to leave it alone until they have first of all built up the feeding and carrying capacity of their farms by systematic Top-dressing and the re-grassing of any poor paddocks, together with the provision of a supply of supplementary Summer and Winter Feed so that the cows will winter well.

Unless herd testing is done under good conditions a man possibly will throw out cows that are better than the best tester in his herd. Some cows on poor pasture will give a fair test and a reasonable quantity of milk, and when put on good pasture will not increase to any extent, while others previously doing badly will prove themselves under the better conditions to be excellent producers.

Suitable shelter belts or live fences make a big difference to the herd's production capacity, in that they provide protection from Winter storms and the hot Summer sun; apart from shelter it is one of the best paying crops you can grow; see page 20.

The provision of the best possible feed for your stock is a sound business proposition that no one will deny; but how many carry it out? We all acknowledge that for a given period a beast needs a certain quantity of food to keep it alive and fit, all food over and above this amount is available for fattening the beast or providing butterfat, etc. For any animal the fattening or butterfat producing process is largely under the control of the feeder, and the rate at which it proceeds is determined mainly by the amount and nature of the food supplied over and above the requirements for maintenance and growth. This being so, it will be agreed that the object of all should be to increase production, or turnover as it is called in the business world, and consequently cut down the constant overhead expenses such as wages, interest, rent, building depreciation, fence renewals, etc., etc.

Apart from herd testing and stock management, increased production depends on the following main factors:—

- (1) Proper working of the soil and rotation of crops.
- (2) The intelligent and consistent use of fertilizers for crops and pastures.
- (3) The sowing of only the most Reliable and highest grade Seeds available.

For Nearly One Hundred Years the Standard of Quality



SINCE 1826 the name of **YATES** has been associated with **RELIABLE SEEDS**, with the growth and distribution of all that is best in agricultural and garden seeds.

The Parent House of **YATES** was established in England in 1826; the New Zealand and Australian houses in 1883. During all that period we have consistently increased our business, having only recently opened a branch at Whangarei. This expansion has only been brought about by giving the most careful attention to the growing, selecting and testing of the seeds bearing our name, with the result that **YATES' RELIABLE SEEDS** are known throughout the length and breadth of Australasia as the standard of quality—as seeds which give unfailing satisfaction.

Whether you require seeds by the packet or by the hundredweight, we are equally at your service, and welcome your enquiries.

Arthur Yates and Co. Ltd.
Albert St., Auckland

Seed Guarantees.

FARMERS with only a slight knowledge of seeds realise that the quality of them may vary greatly, both as regards germinating powers, purity and strain. Germinating powers of seeds may vary within a very wide range. Ryegrass, for instance, may grow anything from 40% to 100%. It means very little when a merchant guarantees a certain seed to grow, say, 90%; it might grow that in a testing house and still cause a failure, because if that seed is **old**, its growth will be **weak**, and when sown outside under adverse conditions, its germinating powers **will not be strong enough to live**. The guaranteeing of purity is nothing new, but it looks good on the surface, as all guarantees do; it, however, does not hoodwink the farmer, who thinks things out. Take, for instance, Clover seeds, which are guaranteed, say, 95% pure—what about the other 5%? If only **one part** of that 5% of impurities is "**dodder**" seeds, which they may contain, it means that in the sowing of, say, Red Clover seed you would be establishing **TEN THOUSAND PATCHES OF DODDER ON EVERY ACRE SOWN** if all the dodder seeds grew, because this Clover is usually sown at the rate of about 4 lbs. per acre, which amounts to about one million Red Clover seeds per acre. We fully realise that if we sent out seed to our customers which contained even a one-thousandth part of some such noxious weed, we could not hope to give satisfaction.

When all is said and done, it comes down to the same old thing, which is, that the only real guarantee of satisfaction a farmer can have is to find out who is **the most Reliable Seedsman**, and to place his confidence in him. Our very extensive Seed business has been built up by practically one method only, namely, by the great advertisement we receive through the many complimentary remarks our thousands of satisfied customers make to their friends.

Yates' Seed Maize

Selected and Specially Re-machined Samples.

Maize is a summer crop of the utmost importance in all temperate countries of the world which do not have late frosts and which also have a reasonable rainfall during the summer months. It is a most valuable crop for dairy farmers, because practically no other summer fodder crop is capable of producing such a heavy yield of green feed per acre at a time when it is needed most. Many a short-sighted farmer has had his dairy herd drop a third in their butterfat yield through not providing a sufficient area of Maize or other summer fodder. In fact, the man who does not provide suitable summer green feed is not getting the most out of his dairy herd. Maize can be sown as soon as the cold weather is over. Sow from $2\frac{1}{2}$ to 3 bushels per acre for green feed, or 15 to 18 lbs. if it is for cobs. For green feed, it should be sown through every other coulter, together with 3 to 5 cwt. of A.Y. Maize Manure, or something similar. The crop should be ready for cutting in about three months. To get the best results, a succession of sowings should be made. If the seed is sown in wider drills and cultivated, a much heavier yield will be obtained. As the majority of our customers will require Seed Maize for a green crop, we would advise them not to overlook the White Grain varieties, as they are exceptionally good green crop Maize, producing a heavy, leafy, succulent growth.



Yates' Dairy Cream.

YATES' DAIRY CREAM.—This is the variety which gave the best results for green fodder purposes in our trials. It is an exceptionally strong grower, and our recommendation for green feed.

YATES' HICKORY KING.—A well-known white-seeded main crop variety for green feed purposes, producing an extremely heavy crop. Our re-machined sample is excellent.



This Photo gives some idea of the Yield of Maize per Acre.

YATES' 90 DAY.—The true early Flint Maize; one of the best early green crop varieties we have; is most suitable for cobbing purposes in districts with a short season.

YELLOW HORSETOOTH (for Green Feed).—The type we offer comes in early, and throws a large quantity of leafy foliage.

ROUND YELLOW (Motiti Island).—A popular green feed Maize. The strain we offer matures early.

EARLY RED LEAMING.—Is an early red grained variety, which is very useful for green feed.

INVERNESS WHITE.—The earliest white; grain deep and solid; excellent for early green fodder.

EXETER JERSEY.—A very deep, soft grained Maize; a main crop variety, which is very tall growing.

FOR PRICES SEE OUR CURRENT LIST WHICH IS POST FREE.



Millets

A Quick, Cheaply-Grown Summer Fodder Crop.

MILLETS are eminently suitable to provide green fodder when the pastures are drying up. They require very little labour to cultivate or harvest, and will grow fairly well on even poor soils. Several of the varieties when grazed shoot again and again. As a follow-on crop for milking cows and growing lambs, the several varieties of Millets especially indicated are excellent. Millets should be sown at the rate of about 14 lbs. to 20 lbs. per acre as soon as the frosts are over. If you are not providing any other green fodder, one acre of Millet should be sown to every four milking cows. They stand dry weather very well, and therefore can be sown up to January. They should be ready for the first eating off in eight weeks and again in about two to three weeks' time. It is best to feed off when about 12 to 24 inches high. To get maximum results, they should not be fed off too late or too early. The stalks become bitter after a frost, so that Sorghums should be sown for late feeding.



MILLET TRIALS AT OUR EXETER TRIAL GROUNDS

Varieties and Their Uses

JAPANESE MILLET, for grazing purposes or green fodder, gives the earliest growth. This variety is of upright growth, and stools out fairly well. It grows up to three feet or more high, and "comes again" very quickly after being fed off or cut; also makes excellent hay. This variety is by far and away the most popular, owing to the great amount of leafy feed that it provides. Our seed is Victorian, and is guaranteed free of ticks. Cheaper seed is grown in Queensland, but should not be imported, as it is liable to contain ticks, which carry the dreaded "Rinderpest," or Red Water disease.

WHITE FRENCH is smoother and of slightly more succulent foliage, and grows up a little higher, but does not stool so well. This Millet also recovers quickly after feeding off or cutting.

HUNGARIAN MILLET. — Another very valuable summer green crop. Sown in the spring or early summer, it will give a wonderfully heavy crop of hay or ensilage. For hay purposes, the Hungarian Millet is superior to some varieties. It is a quick grower; in fact, in suitable situations, if the seed is sown in September, it will mature early enough to obtain a second crop of hay off the same land. Twelve pounds of seed per acre in drills, or 20 pounds broadcast is a fair sowing. When in bloom it should be cut and treated as other hay.

BROOM MILLET. — The grain is an excellent fowl feed, but the great value of this variety is for broom making. We stock the best Hunter River-grown Long Hurl variety.

FOR PRICES SEE CURRENT PRICE LIST—ISSUED MONTHLY.

LOWER ALBERT STREET, AUCKLAND.

Sorghums

Are Much More Nutritious Than Maize.

This plant has wonderful adaptability to different soils and climates, and will produce big yields of splendid fodder where Maize would fail.

The early varieties grow quickly even on poor land and under droughty conditions. The late sorts grow under similar conditions, and stand well into the winter—even when the flag is frosted, the stalks retain their succulence and sweetness—and provide a very palatable and fattening fodder when it is most acceptable.

Many farmers are reluctant to grow Sorghum for fear of poisoning their stock; but the Sorghums are too valuable to exclude. They should not be fed green until the crop is matured, that is when the flowering stage is reached. If the crop becomes stunted with drought, or frosted, it is also dangerous to feed green; in this case it should be cut and dried or made into ensilage. Matured Sorghum can be fed without any risk.

The earliest sowing of Sorghums should be made directly the frosts are over, and the second crop may be planted up to January; November and December being the best months.

In rich, moist land, and where fineness is desired, up to 30 lbs. can be sown broadcast per acre, but in ordinary situations 20 lbs. is ample; it is a good method in such land to sow in drills 3ft. apart, and keep the land between the rows cultivated. In drills, about 10 lbs. per acre is sufficient. Prices vary with the market.

SORGHUM, SACCHARATUM OR BLACK SORGHUM.—The hardiest, recommended for cold districts where the season is short. This sort is the favourite in New Zealand.

SACCALINE (THE IDEAL LATE SORGHUM)—Exceptionally rich in sugar, it is very palatable and fattening to all classes of stock, while its succulence and freedom from "pithiness" after standing through severe winter is most marked.

EARLY AMBER CANE.—The earliest and the best variety to withstand droughty conditions.



SORGHUM.

IMPHEE OR PLANTER'S FRIEND.—For late crop, as it stands cold weather and retains its sweetness and feeding qualities even after the seed is matured.

Sudan Grass

A Great Drought-resistant Annual.

Sudan Grass is a distinctly valuable forage plant. It can be pastured or cut and made into hay, or it can be used for ensilage.

Sudan Grass is strictly an annual and dies each year like Millet. Grows to a height of four to six feet and will make a greater yield of forage under adverse conditions than anything else we know. It grows rapidly and should be ready to cut for hay in from 7 to 8 weeks.

Stock of all kinds eat Sudan Grass readily and the food value is second only to Alfalfa. Do not sow till weather is warm. For a hay crop, sow broadcast at rate of 20 pounds per acre.

As will be readily understood in such a quick-growing and vigorous plant, Sudan Grass responds very noticeably to fertilisers. An application of from 2 to 3 cwt. of A.Y. Maize Manure with the seed is strongly recommended.



Sudan Grass showing cut in heap and uncut.

FOR PRICES SEE OUR CURRENT LIST WHICH IS POST FREE.

Buda Kale, Chou Moellier and 1000 Headed Kale



A Plant of Buda Kale before being eaten off.

Owing to the great number of failures of Swede and Turnip crops during the last few years, due to diseases which have been attacking them, Farmers are partly losing faith in them as reliable crops, and they are looking round



Thousand-headed Kale.

for something to take their place. This has lead to a great increase in the areas of Kales that are now being sown; these do not take the fly to any great extent and are fairly reliable croppers. Roughly speaking there are three main types:—

- (1) BUDA KALE and its sub varieties; this variety stools out right at the ground, and it can be eaten off many times; after being eaten off it comes away very quickly indeed.
- (2) THOUSAND HEADED KALE; this grows tall, and is fairly well branched from the bottom, but does not stand eating off as well as Buda Kale.
- (3) CHOU MOELLIER; this variety grows up in one thick

stem with a large leafy head; it does not stand eating off well, and the marrow stems are inclined to taint the milk; the seed of all these can be sown during Spring or Summer.

BUDA KALE is not a new thing; it has been grown for very many years in all countries. It is a strong grower and on fairly good land throws a tremendous lot of feed; a great advantage it has over Thousand Headed Kale and Chou Moellier is that it can be fed off again and again; its large number of stalks are not thick and they sprout out again when eaten off; the way that it recovers after having been eaten off is astounding; unlike the Chou Moellier it can be fed off in breaks without damaging the crop, and it does not taint the milk; it also does not take the fly to any extent. The photo below was taken three weeks after having been fed right off and it shows the great amount of growth that had taken place in that time. Sow two to three pounds of seed



Buda Kale three weeks after being fed right down.

per acre, and as it is a gross feeder it stands being well manured; we suggest three to five cwt. A.Y. Rape Manure, or its equivalent.

THOUSAND HEADED KALE is much taller than Buda and the stalks are much thicker; it stand off fairly well. Sow $1\frac{1}{2}$ to $2\frac{1}{2}$ pounds of seed per acre.

The photo alongside will illustrate the habit of growth of Chou Moellier; fair areas of this have been sown during the last few years. The trouble in New Zealand is that farmers have not the time to cut and cart out; they want to feed off in Breaks, and for this purpose Chou Moellier does not compare with Buda Kale as the stock break it down and consequently it does not sprout out again to any extent; the thick marrow stems, although good feed, are a little bit inclined to taste the milk.



Chou Moellier.

LOWER ALBERT STREET, AUCKLAND.

Cattle Marrows and Pumpkins

PROVIDE EXCELLENT WINTER FEED WITH LITTLE LABOUR.

The reason for the enormous increase in the popularity of Marrows and Pumpkins lies in the fact that they are heavy and sure croppers, and are not subject to the diseases which last winter caused such large areas of Swedes and Turnips to be failures. They also do not taint the milk. Besides the above, very little labour is entailed to successfully grow them. They may be sown from September to November, but not before the frosts are over. The Marrows are most suitable for sowing for feeding to stock from late autumn until the middle of winter. The Pumpkins are later in maturing, but keep longer, and are excellent to follow on after the Marrows are finished. Pumpkins and Marrows should be sown in rows 4 to 6 feet apart, at the rate of 4 to 6 lbs. of seed per acre, which should yield from 30 tons to 50 tons of Marrows per acre, or from 40 to 60 tons of Pumpkins per acre. They are both gross feeders, and will stand any amount of manure. We recommend 5 cwt. of A.Y. Maize Manure, to be sown with the seed. The best position to grow them is on gentle sloping land facing the sun.

For
CURRENT
PRICES
see our
Monthly
Folder,
which is
posted
monthly to
you.



Yates' Waikato Mammoth Pumpkin. A good crop which gave excellent winter feed last winter.

YATES' SOLID CATTLE MARROW.—This variety is a sure and heavy cropping cattle Marrow, which was first introduced to us by a well-known farmer, who was delighted with its cropping and feeding values. It will produce a much heavier tonnage per acre than the ordinary mixed Cattle Marrow, as each vine produces a large number of Marrows, which, though a little smaller, are practically solid right through; an ordinary good crop should produce from 30 to 50 tons or more per acre of excellent fodder for feeding to stock from March to June.

YATES' MIXED CATTLE MARROW.—This Marrow is popular with dairy farmers for feeding to stock from March to June. A good crop, well manured, will produce a heavy tonnage per acre. Unfortunately, this Marrow is often hollow inside, and consequently is not such a heavy cropper as the previous sort, which, we think, will in time supersede this variety. Nevertheless, this sort produces very good winter feed.

YATES' MIXED CATTLE PUMPKIN.—This variety has been saved and grown by local farmers for some time. Most of the Pumpkins are hard-skinned and very good keepers. Our seed is saved from only the best Pumpkins, and is clean and of excellent growth.

YATES' WAIKATO MAMMOTH CATTLE PUMPKIN.—Has been grown by some well-known farmers in the Waikato for some time. Its enormous cropping qualities are now well known. In our trials last year it stood out prominently, being far and away the most robust grower. It will grow well on land where other sorts fail. The photo. above gives some idea of the enormous crop it produces. Crops of 40 and 60 tons of Pumpkins per acre can easily be obtained on good average land. Some of the individual Pumpkins are so large, that it takes a man all his time to lift them. It is a main crop sort. For very early feed, we recommend sowing part of the area with **YATES' SOLID CATTLE MARROW**. For feed in the autumn and early winter, sow 4 to 6 lbs. of seed per acre in rows 4 to 6 feet apart, and on any of the very best land we recommend using 3 to 5 cwt. of A.Y. Root Manure.

YATES' EARLY MONSTER PUMPKIN.—This sort was the earliest in our Pumpkin trials. As its name implies, it is a very large Pumpkin, round, and of an orange-yellow colour. It is a suitable sort to sow in districts where early frosts are common.

YATES' KUMI KUMI.—This is a type of Cattle Marrow of large size, which is similar to the ordinary mixed Cattle Marrow.

What is a Trial Ground?

IT is, or should be, similar to the laboratory of the chemist, a place where comparisons are made of samples at close range to determine differences in merits.

We have hundreds of photographs of Yates' Trial Grounds at Auckland, Exeter and Derwentside, N.S.W., and Timporley, England, where thorough tests of quality are always being made. The photo below of Mangold Trials will give you some idea how this is done; each sort to be tested is marked with a numbered label, the total number of tests vary but always run into many thousands. Some trials are of seed supplied to us by Foreign Seed Merchants, but most seeds are grown by ourselves through direct contracts with farmer growers in Australia, New Zealand, California, U.S.A., Canada, England, Holland, France, South America—in fact, in any country where we can find intelligent Seed Growers, and the best climate and soils because different sorts of plants require distinct soils.

No longer do Seedsmen worth considering, obtain all their supplies from one source; they reach out to the ends of the earth hunting for the spots that are best adapted for producing well developed Farm Crops and well ripened Seeds.

Through obtaining supplies of Seed from the four quarters of the globe, new seed is constantly arriving as harvests occur at different periods of the year, and as Seeds are being used all the year, there is nearly always a fresh supply just coming to hand.

It is very important to test the quality even if we know the source of origin, for mistakes sometimes occur, they occur with everyone, but the field tests nearly always discover them. It will be perceived that a Trial Ground is a workshop, a shop of intense competition between samples, as to shape, colour, quality, habits etc., and all these qualities can be changed by different climates and soils where Seeds are produced.

No farmer should purchase seed except from a man who has a Trial Ground. All true Seedsmen have Trial Grounds, so that they will know what they are supplying their customers; they cannot hope to know without a Trial Ground.

A reader might ask what kind of observations are made in Yates' Trial Grounds? Our Trial Grounds are grounds for comparison, to see, for instance, whether the same variety from different sources show the same characteristics as regards shape, weight, colour, texture, or have they cores, do they run to seed early or late, are they very productive in foliage or unprofitable, are they early or late, and do they succumb under hot sun and dry weather, or do they resist drought?

Thousands of questions and queries asked are answered in these comparisons of plants of the same variety. All characteristics can be altered by continued selection or by soil influences or climate; some plants well known in England, for instance, may take on an entirely different character when grown in New Zealand.

By constant work at our Trial Grounds we have evolved many new varieties, such as Yates' Waikato Mammoth Pumpkin, Dairy Cream Maize, Dairyman Mangold, Mangere Prize Cucumber, Burwood Prize Tomato, and a host of others which for lack of space we cannot mention.

A Trial Ground is not alone for testing growing plants and selecting new strains, but is also used to test out the quality of different fertilizers; all fertilizers are not equally adapted for all Crops, but few farmers as yet consider the importance of this.

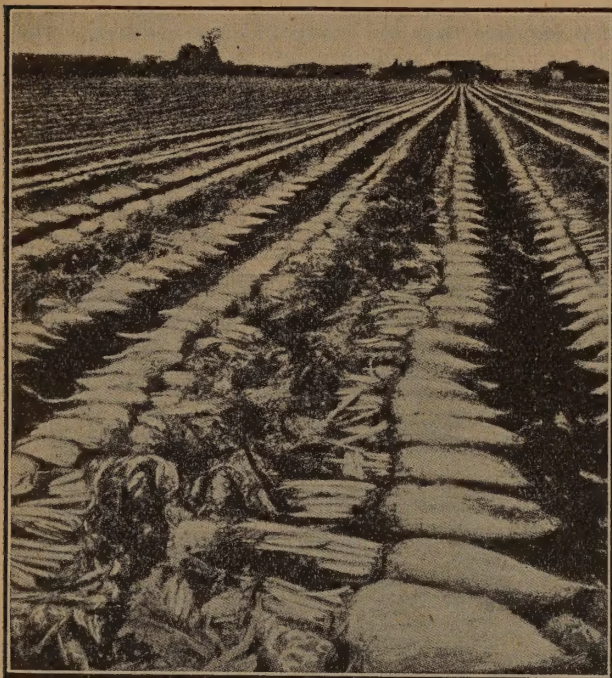
From the above you will see that we are doing our utmost to make certain that you are supplied with Seeds and fertilizers that will make results more certain and consequently make the farmers' lot in general a little easier.



Mangold Trials to test for Trueness.

How are New Sorts of Mangolds Raised ?

The twentieth century in the future will be looked back on as the period when some of the greatest improvements in things Agricultural and Horticultural took place; if our great grandfathers could come back and see the Agricultural and Horticultural productions of to-day they would be astounded. One just needs to glance through one of our Catalogues of about 1890 to see what vast improvements have already been made



Yates' Dairyman Mangold being Selected for Seed Purposes.

in the varieties of Agricultural and Horticultural crops, and we venture to say that what has been done in the past will be carried on to an even greater extent in the future as scientists now understand the "mendelian and other theories" which explain the reason why one plant or one animal crossed with another of known pedigree will tend to throw certain definite characters after having been reproduced once; but cross hybridisation is not the only means by which improved strains of root crops, animals, etc., are produced. By "selection" great improvements are also made; this selection has to be continuously and rigorously carried out over a number of years before any great improvement is noticed by the layman. The first thing to do is to fix upon an ideal; take Mangolds for instance, which are to be used for feeding to stock; what is wanted is a Mangold that will produce the greatest amount of sugar or saccharine and dry feeding matter per acre, together with the qualities of early maturing, long keeping, good shape, robust constitution, disease resisting, as well as being appetising to stock. The sample to be selected having been decided upon, a small area is sown, and as they develop, the

slower maturing varieties are discarded. Next the roots are tested for sugar, cell formation, texture, and dry matter; this is done by cutting out a small section of each root and examining it thoroughly by microscope and spectrum, and testing it to find the water and dry matter contents of each root; each sample is numbered beforehand so that they can be recognised after this has been done, and the roots tested for weight and shape. There will probably be one root better than the rest; this root is planted by itself and the seed saved from it. This seed is sown again and the same process gone through, always bearing in mind the "ideal" that is being aimed for.

Our Manchester House has spent many years of patient work improving Mangolds, and by cross hybridisation and selection it has greatly improved the quality of Mangolds. We, ourselves, are constantly trying each new sort or selection of our own English House as well as all other competitors, and Yates' Dairyman has been selected as being an excellent Mangold for New Zealand conditions; it is exceedingly sweet. If you try it alongside other sorts of the same weight and feed them to stock in separate heaps, you will find that the stock will nearly always eat all the Dairyman first before eating the other sort.

This wonderful Mangold has been awarded a first-class certificate several times—and to obtain this special certificate is a very difficult undertaking. Dairyman is a long reddish yellow root, but not so long as the Mammoth Long Red; it grows more above the ground and is very easily harvested, requiring but little exertion to pull same. The size of the roots, like other varieties, depends entirely upon circumstances; they are frequently grown to a size weighing from 15 to 20 lbs. each, but we recommend farmers to grow them smaller; they can do this and still get the large weight per acre by allowing less space in between the rows. The smaller roots contain a higher percentage of dry matter, consequently the crop is more valuable than if large roots are grown. According to comparative trials made, this valuable root cropped as follows per acre:—

Yates' Dairyman 59,730 lbs. of root containing 7,818 lbs. of dry matter.

Mammoth Long Red, 50,930 lbs. of roots containing 6,387 lbs. of dry matter.

Golden Tankard, 48,950 lbs. of roots containing 5,123 lbs. of dry matter.

This shows over 17 per cent. more weight of roots and over 23 per cent. more dry matter per acre than Mammoth Long Red, and over 22 per cent. more weight of roots and over 52 per cent. more dry matter than Golden Tankard. The cut, greatly reduced, shows the shape of a typical specimen. Everyone agrees that this is a very superior Mangold.



Yates' Dairyman.

Yates' Mangolds

Are Producers of the Best Possible Winter Feed.

See Coloured Plate on Back of Catalogue.

There is no crop that contains better feeding value or produces any heavier a crop per acre than Mangolds do. Great improvements have been made by selection to the already high sugar contents and yield per acre. A crop grown from our selected stocks has no competitor for feeding value. They are also not subject to the diseases which attacked the Turnips and Swedes this last winter. The seed should be sown in the late spring in deep, well-worked soil, in rows 28

inches apart, so that they can be cultivated. They are gross feeders. We recommend using from five to ten cwt. of A.Y. Root Manure per acre. The extra yield as the result of using the larger quantity of manure will handsomely pay you, as they yield anything from 40 tons to 70 tons of roots per acre. They should be ready in about six months. Up to a point, the longer you store them, the more they improve in feeding value and palatability to stock.



A Fine Stack of Mangolds which Produced Excellent Winter Feed.

YATES' DAIRYMAN.—Is a new variety and a great improvement; undoubtedly the best and most feeding Carrot that has yet been raised; is already a great favourite among those who tried it last year. See opposite page and coloured plate on back of catalogue.

YATES' MAMMOTH LONG RED.—Is one of the largest in cultivation. The flesh is firm, close-grained, and full of saccaline. It is a very heavy yielder, indeed.

YATES' WHITE KNIGHT.—A good cropping sort, which is similar to Jersey Queen.

YATES' YELLOW GLOBE.—Large, slightly oval-shaped roots, free from frangs; is of the highest feeding quality, and keeps well. We strongly recommend it.

YATES' JERSEY QUEEN.—We have specially selected stocks of this popular heavy cropping and high feeding quality Mangold.

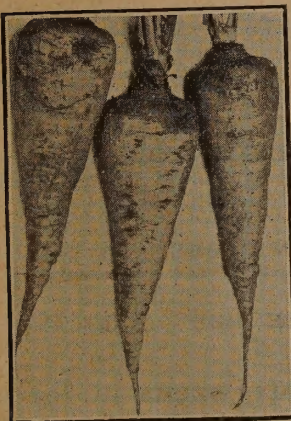
YATES' NEW SUGAR ROSE.—This sort, if anything, contains more saccaline than any other, and is also an exceedingly heavy cropper. We recommend this sort with confidence.

Carrots.

These are also exceedingly valuable for winter feeding. Stock greatly relish them, and soon show the result in increased butter-fat yield and in the stock's condition. Sow 3 to 4 lbs. of seed per acre in rows, 28 inches apart, in well-worked, deep soil. If sown in the spring, they will be ready about April or May, and should produce anything from 20 to 40 tons of roots per acre.

YATES' MATCHLESS.

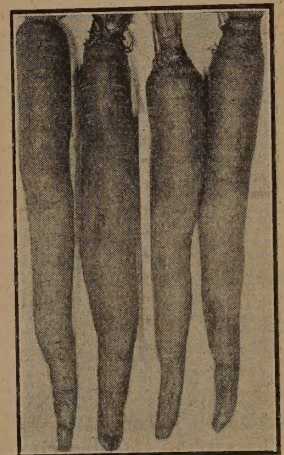
The Photo alongside illustrates this fine field Carrot, 12 inches long, 3 inches wide. Rich white flesh of fine texture. Excellent where Rabbits are bad.



Matchless.

YATES' WHITE BELGIAN.

The Photo alongside illustrates this splendid long white variety; grows nearly a third out of ground. Flesh is rich and solid; is the best field Carrot grown.



White Belgian.

See Coloured Plate Back of this Book.

LOWER ALBERT STREET, AUCKLAND.

Yates' Swedes and Turnips

ARE PRODUCERS OF HEAVY NUTRITIOUS CROPS.

Swedes and Turnips are of the greatest importance to all farmers, as they produce exceedingly heavy yields of highly nutritious feed. Swedes, though taking the longest to grow, are indispensable, as they contain by far the greatest quantity of saccharine and other fattening qualities. They need to be sown about Christmas, and are ready about June. The Aberdeens, or yellow fleshed Turnips, come next in feeding qualities. They take about four months to grow. The soft white fleshed Turnips are much quicker growers, but are not of the same feeding value as Aberdeen Yellow Turnips or Swedes. They can, however, be sown practically all the year round as a catch crop. Quality is of the greatest importance with all seeds; it is everything with Swedes and Turnips. The cost of the most reliable seed procurable is only about 2/- per acre, and success is everything. Being farmers ourselves, we fully realise what quality means with Turnips. We have by far the largest testing trial grounds in Australia or New Zealand, and therefore know what we are sending out to our customers. All the varieties we offer in this list are grown from tested strains, and we know them to be suitable types for this climate; it is a fallacy to think that a certain strain of Turnip is certain to do as well here because it is a success in the English climate.

All our Swedes and Turnips are sent out in 1lb sealed packets with our seal and date on.

SWEDES.

YATES' JOHN BULL.—

Is a round-shaped, purple-top Swede, which will produce a good crop of long-keeping roots.

YATES' CHAMPION PURPLE TOP.—

Is one of the favourite purple-top Swedes, and is a great cropper.

YATES' MONARCH PURPLE TOP.—

A splendid and a very popular variety, with a rich purple top growing well out of the ground; a very desirable sort for feeding off.

YATES' SUPERLATIVE.—

A very heavy cropper, tankard shape, with purple top and a small neck, firm flesh, very high in sugar; one of the greatest favourites.



A NICE FIELD OF SWEDES GROWN FROM YATES' SEED.

YATES' CRIMSON KING.—Of oblong shape; stands well out of the ground; a heavy cropper, and one of the best.

YATES' ELEPHANT.—A popular heavy cropper, similar to Monarch.

YATES' MAGNUM BONUM.—A splendid variety, growing well out of the ground.

TURNIPS.

YATES' PURPLE TOP YELLOW ABERDEEN.—Is a large and very productive yellow fleshed field Turnip of excellent quality; is a good keeping variety, and the favourite Aberdeen.

YATES' GREEN TOP YELLOW ABERDEEN.—Similar to above, except that it has a green top.

YATES' DEVONSHIRE GREYSTONE.—Is the favourite white fleshed Turnip. It produces a greater yield per acre in a given time than practically any Turnip.

YATES' PURPLE TOP MAMMOTH.—A very large, handsome purple top, early, white fleshed Turnip; a great favourite.

YATES' IMPERIAL GREEN GLOBE.—One of the earliest and hardiest of the white fleshed Turnips; a heavy yielder, and a favourite sort.

YATES' HARDY GREEN GLOBE.—Very similar to above; is also a favourite.

YATES' LINCOLNSHIRE RED.—A desirable and good cropping variety.

YATES' GREEN TOP SIX WEEKS.—As its name implies, is the earliest variety, and is most useful as a catch crop for quick feed.

Pigs and Profits. A Tuberos Crop that is a Gold Mine.

It is at last being realised that pig breeding done scientifically is going to be one of the big primary industries of New Zealand. It used to be thought that it was absolutely necessary to have the by-products of the Dairying Industry to fatten Pigs up properly. This is now realised by many to be an erroneous idea as

prevail in New Zealand the cost should not be more than 7/- at the same age. To be at all profitable, Pigs must be properly fed; unless this is done the animal becomes the worst of the farmers' troubles. Pigs are intelligent animals and if they are not fed on the right lines they are apt to go and get what they need for themselves, with the result that they break down fences and all other barricades in their eagerness. Farmers are inclined to think that three feeds of "skim dick" a day is sufficient to satisfy the Pig, and that the animal only broke through into the crops from a sense of mischief, but this is not so.

The Pig's digestive organs are almost as delicate as a human being's, on the same system as man's are formed, and therefore a continuous milk diet is bad for the animal, which will then seek some other kind of fodder. Dairy produce is not absolutely essential in the feeding of Pigs, as has been demonstrated by America. Five sows can be run on $1\frac{1}{2}$ acres of land as against only one average cow. Allowing an average litter of eight pigs per sow, and placing the marketing price as low as it is likely to go, there is still a clear profit of £40 from an area of $1\frac{1}{2}$ acres.



Making a clean job, feeding in Artichokes.

these photos of Pigs feeding on Artichokes show; also the photo on page 19 showing Pigs grazing on Lucerne.

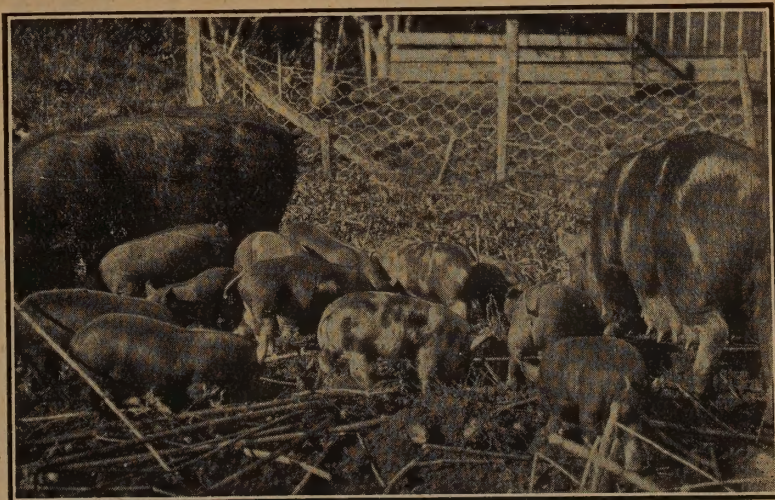
Enormous numbers of Pigs are raised and fattened in America, and there it is largely done by grazing them on fodder crops produced on the same farm that the Pigs are fattened on; it is an expensive method to buy grain meals and whole grain, etc., for feeding.

The top photo on this page shows the Pigs feeding on Artichokes in breaks; this entails very little labour as they will root them out themselves. The photo shows what a clean job they make of it; in the left hand corner can be seen the next patch of Artichokes ready to be fed off. The second photo shows Father and Mother and the family hard at it. This owner has found that even the little pigs thrive well on feed like Artichokes.

Artichokes should be sown early in Spring at the rate of about 10 cwt. of Tubers per acre; plough them in in rows about two to three feet apart, together with about 4 to 5 cwt. of A.Y. Potato Manure or its equivalent; they will be ready in nine months, and will produce anything from 20 to 40 tons per acre.

New Zealand, as yet, is too young a country to provide much data on the cost of breeding and feeding; but in America they have comparative tables which show that under the highest feeding conditions the upkeep of a sow, if handled properly, was not more than 1/- per head per week; under such conditions weaners should not cost more than 10/- per head when 10 weeks old, while under such ideal conditions as

The area of the Piggery need not be particularly large, but to get the best results it is necessary to divide the ground into a series of small allotments, each growing a different fodder crop, as variety in fodder is a most essential feature of successful pig-raising. Some of the various crops suitable for forage purposes are Lucerne, Oats, Rape, Clover, Turnips, Mangels, Artichokes, Maize, Beans, Peas, Barley, etc. It is necessary to have an adequate water supply, as Pigs are great drinkers. If the animals cannot get a supply of fresh water to help to flush out their systems, they are liable to eat any kind of moist filth, with the result that they become diseased.



Father, Mother and the family hard at it.

Sundry Fodder Crops

The increase of production on most farms in New Zealand depends largely upon the increased growth of root and fodder crops as supplementary food for stock, and this applies in a marked degree to the Auckland Province, where such utter dependence is placed upon pasture and pasture alone.

Even in New Zealand, called "God's Own Country," we have periods when there is often a shortage of food. These times are generally late summer and winter. Many farmers now grow areas of some of the following, so as to be able to carry the maximum amount of stock all the year round and treat them well; they know it pays.

Sunflower

Is an Excellent Fodder Crop.

Sunflower is a reliable and satisfactory crop for ensilage; it will generally do well where Maize cannot be grown successfully as it is not affected by frost to the same extent; it will stand about 3 degrees; it is a crop that does not need a great deal of moisture to keep it growing.

Sunflower in ensilage form is considered to be the best method of feeding, but it has been fed as fodder with very gratifying results; thirty to forty per cent. of Maize with the Sunflower makes excellent ensilage. When using for ensilage it should be cut when about 50 to 75 per cent. in bloom; it is then far enough advanced, and contains a remarkably large proportion of feeding matter. The following comparisons of tonnage per acre in the same district over a two-year period are interesting:—

11 Tons 1640 lbs. Maize per acre, containing 68 per cent. moisture.

31 Tons 1540 lbs. Sunflower per acre, containing 84 per cent. moisture.

It can be sown early in Spring and up to late Summer, using 15 to 25 lbs. of seed per acre; it grows eight to twelve feet high. If you have not already tried it, we suggest that you sow an area along with your Maize or other fodder to try it out.

For prices see our current monthly folder.

ALGERIAN OATS.—These are greatly favoured as a catch crop, as they do not take the rust. They are often sown with Tares at the rate of two bushels of Oats to one bushel of Tares.

BLACK SKINLESS BARLEY.—This variety stools out well, and will stand feeding off two or three times. Sow three bushels per acre.

CAPE BARLEY.—Very similar to the above variety; is often sown in conjunction with Tares, using one bushel of Tares to two bushels of Barley. Very hardy.

RYECORN.—Is most useful for supplementary feed, sown by itself or in conjunction with Oats, Barley or Tares.

VETCHES OR TARES.—One of the Pea family; very hardy; makes very nutritious feed when sown with Oats, Barley, Ryecorn, etc. Sow one bushel of Tares to two bushels of Oats, etc.



Sunflower in Field 20 to 35 tons is not an uncommon yield per acre.

BLUE PRUSSIAN PEAS.—These make the best of fattening feed. Sow $2\frac{1}{2}$ to $3\frac{1}{2}$ bushels, and feed off when nearly ripe. Stock need plenty of water when feeding off.

PARTRIDGE PEAS.—Used for the same purpose as Blue Prussians, also in conjunction with Grain, at the rate of $1\frac{1}{2}$ bushels of Peas to $1\frac{1}{2}$ bushels of Oats, etc.

TUSCAN WHEAT.—This can be used for fowl feed or green feed. Sow $2\frac{1}{2}$ to 3 bushels per acre.

BUCKWHEAT.—For green feed or fowl feed, this is a most useful crop; is very hardy, and throws a lot of feed. Sow $1\frac{1}{2}$ bushels for grain, or $2\frac{1}{2}$ bushels for green feed.

CATTLE CABBAGE.—For the dairy farmers, this crop is fast growing in favour, as it will produce from 30 to 40 tons of fodder per acre. Sow 12 ozs. per acre, and transplant to $2\frac{1}{2}$ feet apart. Will produce enormous cabbages.

BROAD-LEAVED ESSEX SOWING RAPE.—This crop for fattening or supplementary feed is now very well known. Sow 2 to 3 lbs. per acre, which should produce from 25 to 40 tons per acre of excellent fodder.

All the above-mentioned seeds, like every other seed we sell, are saved from specially selected crops, extra machined, and are also of excellent growth. We may say that our prices, as per the enclosed list, are the lowest possible for seeds of the highest quality.

A Great Future Pasture Combination.

The Subterranean, White,
Paspalum Association.

We think that this combination of Grasses and Clovers has a far greater future before it than any average person realises, especially for all the districts of Auckland and North of Auckland, where severe Winters are not experienced; Subterranean Clover is an annual very

because any permanent pasture grass should have a Clover as a companion; one of this companion's duties is to collect Nitrogen from the atmosphere and make available for the Paspalum or other grass. Broadly speaking, all that is required in a Paspalum, Subterranean, and White Combination is to top-dress occasionally with phosphates; phosphates make the Clover grow, and the Clover supplies the very necessary Nitrogen for the Paspalum.

(2) The other drawback of Paspalum is that it is **not** one of the earliest grasses to start growing in the Spring; Subterranean Clover fills that want in that it is one of the first to come away in the Spring, and it has made tremendous growth by the time the Paspalum gets under way.

If you already have all your pastures sown down and do not want to plough them up, it can easily be introduced by surface sowing through the top-dresser when you are doing your Spring top-dressing; if this is not convenient, a few pounds carried in your pocket when riding round the farm, and scattered, will introduce it.

The Government Agricultural Department recommend sowing 3lbs. to the acre in a mixture, but this, to our mind, is too expensive; 2 ounces to the acre will introduce it. It re-seeds well and will soon be all over the farm.



The above Photo shows the dense growth Subterranean Clover makes.

palatable and much liked by stock, which reseeds itself annually. Its name Subterranean arises from the peculiar habit its seed stalks have of growing downwards when seeding; this habit makes it hard to harvest. In the last few years special machinery has been devised for harvesting it, and this has naturally resulted in the price of it being lower and the seed more plentiful. We have known for a number of years about its great value, but have not specially recommended it to our customers for two reasons:—

- (1) Because we could not get any great quantity saved, and
- (2) Because it has been so prohibitive in price.

Both of these troubles are over for the present, and it is already in very heavy demand.

The place where it shows to best advantage is in combination with Paspalum; Paspalum has two rather bad drawbacks:—

- (1) It is, generally speaking, one of the most vigorous growing grasses, and to a large extent kills out in time, if the Winter is not too severe, all other Grasses and Clovers that are sown with it. This is a drawback



A Young Plant of Subterranean Clover. Note its Spreading Habit.



Paspalum Dilitatum.

Suggestions

WE are always willing to place our wide and varied experience at the service of our customers, and to help them if they will give us particulars of (1) Area to be dealt with, whether hilly, undulating, flat, or swampy; (2) description of surface and subsoil, whether light or heavy; (3) nature of surroundings, whether the land is sheltered or bleak; (4) how drained, if the land is wet or dry; (5) previous crops, and present state; (6) purposes for which the crop is required, i.e., cattle or sheep grazing or temporary pastures.

For general purposes we recommend the following from our personal experience and from satisfactory results obtained from similar mixtures supplied by us. They are given more as hints than as definite directions, as irrespective of soils, requirements vary with locality and with the kind of stock that is intended to be grazed.

From 35lbs. to 40lbs. of seed per acre should be sown on ploughed land, and 20lbs. to 25lbs. on bush burns.

"A" MIXTURE.

For Bush Burns, on good loamy soil, limestone formation.

- 6 lbs. Ryegrass, Yates' Perennial
- 8 " Cocksfoot, ex. mach.
- 2 " Timothy
- 1 " Meadow Fescue
- 3 " Crested Dogstail
- 2 " Danthonia
- 1 " Meadow Foxtail
- $\frac{3}{4}$ " Poa Pratensis
- $\frac{3}{4}$ " Poa Trivialis
- 2 " Cowgrass
- $\frac{3}{4}$ " White Clover
- $\frac{3}{4}$ " Alsike Clover
- $\frac{1}{4}$ " English Rape
- $\frac{1}{4}$ " Turnip
- $\frac{3}{4}$ " Lotus Major
- 2 oz. Subterranean Clover

"T" MIXTURE.

For Temporary Pastures.

- 25 lbs. Italian Ryegrass
- 6 " Red Clover

Western Wulths may be substituted for Italian Ryegrass, using same quantities.

"B" MIXTURE.

For Bush Burns, poor clay soil and second-class heavy land.

- 5 lbs. Ryegrass, Yates' Perennial
- 8 " Cocksfoot, ex. mach.
- 3 " Danthonia
- 2 " Paspalum Dilatatum
- 3 " Dogstail
- $\frac{1}{2}$ " Brown Top
- $\frac{1}{2}$ " Lotus Major
- 2 " Red Clover
- $\frac{1}{2}$ " White Clover
- $\frac{1}{2}$ " Alsike Clover
- $\frac{1}{2}$ " Trefoil Clover
- $\frac{1}{2}$ " English Rape
- $\frac{1}{2}$ " Turnip
- oz. Yarrow
- 2 oz. Subterranean Clover

"F" MIXTURE.

For Ploughed Land, poor soil, permanent pasture.

- 8 lbs. Ryegrass, Yates' Perennial
- 10 " Cocksfoot, ex. mach.
- 3 " Crested Dogstail
- 3 " Cowgrass
- 2 " White Clover
- 1 " Alsike Clover
- 1 " Lotus Angustissimus
- $\frac{1}{2}$ " Lotus Major
- $\frac{1}{2}$ oz. Yarrow
- $\frac{1}{2}$ " Subterranean Clover

"C" MIXTURE.

For Ploughed Land, good loamy soil, permanent pasture.

- 10 lbs. Ryegrass, Yates' Perennial
- 3 " Ryegrass, Italian, Re-cleaned
- 10 " Cocksfoot, ex mach.
- 3 " Timothy
- 3 " Crested Dogstail
- $\frac{1}{2}$ " Meadow Foxtail
- 2 " Meadow Fescue
- 3 " Cowgrass
- $\frac{1}{2}$ " White Clover
- 1 " Alsike Clover
- 1 oz. Subterranean Clover

"G" MIXTURE.

For good dry alluvial Swamp, Flax, Raupo Land.

- 10 lbs. Ryegrass, Yates' Perennial
- 3 " Ryegrass, Italian, Re-cleaned
- 10 " Cocksfoot, ex mach.
- 4 " Timothy
- 1 " Meadow Foxtail
- 2 " Meadow Fescue
- 1 " Poa Trivialis
- 4 " Cowgrass
- 2 " White Clover
- 2 " Alsike Clover
- $\frac{1}{2}$ " Rape
- $\frac{1}{2}$ " Devonshire Greystone
- Turnip

"D" MIXTURE.

For Ploughed Land, good loamy soil, two years' lay.

- 20 lbs. Italian Ryegrass or Western Wulths
- 10 " Perennial Ryegrass
- 3 " Timothy
- 6 " Cowgrass
- 2 " Alsike

"H" MIXTURE.

For consolidated drained Peat Swamp Land.

- 8 lbs. Ryegrass, Perennial
- 2 " Ryegrass, Italian, Re-cleaned
- 12 " Cocksfoot, ex mach.
- 3 " Timothy
- 4 " Meadow Foxtail
- 2 " Cowgrass
- 2 " White Clover
- 2 " Alsike Clover
- 1 " Lotus Major
- 1 oz. Subterranean Clover

"E" MIXTURE.

For Raw, unconsolidated Peat Swamp.

- 15 lbs. Yorkshire Fog
- 4 " Lotus Major

Italian Ryegrass, Before and After Cleaning.



Ordinary Sample.

Cleanings.

Re-cleaned

Quality, not Price, is the Test of Value.

Yates' Prices for Reliable Grass Seeds 10th August, 1925

	Booked Net Cash			Booked Net Cash	
	Less	with		Less	with
COCKSFOOT—	Discounts	Order		Discounts	Order
	s. d.	s. d.		s. d.	s. d.
Yates' Extra Special Re-Machined,			Egyptian or Berseem Clover		
per lb.	1 5	1 3	Over 25 lbs.	2 0½	1 10
Over 10 bushels	1 4	1 2	Rape—Essex Sowing	1 11½	1 9
16/17 lb. Machine Dressed Akaroa	1 4	1 2	Over 50 lbs.	0 7	0 6
Over 10 bushels	1 3	1 1	Mustard—Agricultural	0 6	0 5
17/18 Machine Dressed Danish	1 2	1 0½	Over 25 lbs.	0 9	0 8
Over 10 bushels	1 1	11½	Rib Grass	0 8	0 7
RYE GRASS (PERENNIAL)—			Over 25 lbs.	0 6	0 5
Yates' Machine Dressed, Poverty Bay	13 6	12 0	Meadow Foxtail	0 4½	0 4
" " " Hawke's Bay			Over 25 lbs.	2 0	1 9
Over 10 bushels	13 0	11 6	Timothy	1 10½	1 8
Yates' Extra Heavy Re-Machined	9 6	8 6	Over 50 lbs.	0 9	0 8
Over 10 bushels	9 0	8 0	Crested Dogtail	0 8	0 7
Yates' Extra Machined, Canterbury	9 0	8 0	Over 50 lbs.	1 6	1 4
Over 10 bushels	8 5	7 6	Paspalum Dilatatum, A.Y. Australian	1 5	1 3
Finest Southern	8 8	7 9	Over 50 lbs.	1 7	1 5
Over 10 bushels	8 2	7 3	Danthonia, Re-Dressed Pilosa	1 6	1 4
RYE GRASS, ITALIAN—			Over 50 lbs.	2 3	2 0
Yates' Giant Re-Machined	8 6	7 6	Danthonia, Re-Dressed Semi-Annularis	2 2	1 11
Over 10 bushels	7 11	7 0	Over 50 lbs.	1 10½	1 8
Yates' Re-Machined	7 11	7 0	Fescue, Chewing's Re-Machined	1 9½	1 7
Over 10 bushels	7 4	6 6	Over 25 lbs.	1 11½	1 0
Western Wulths, Re-Machined	7 11	7 0	Fescue, Meadow	1 0½	0 11
Over 10 bushels	7 4	6 6	Over 50 lbs.	0 11½	0 10
Prairie Grass, Re-Machined	11 10	10 6	Fescue, Tall	0 10½	0 9
Over 10 bushels	11 3	10 0	Over 50 lbs.	0 8	0 7
CLOVERS—			Fescue, Hard	0 7	0 6
Cowgrass, Yates' Colonial	1 5	1 3	Over 25 lbs.	1 11½	1 0
Over 50 lbs.	1 4	1 2	Fescue, Red	1 0½	0 11
Cowgrass, Yates' Finest Imported	1 3	1 1	Over 25 lbs.	1 1½	1 0
Over 50 lbs.	1 1½	1 0	Fescue, Sheep's	1 0½	0 11
Red, Yates' Colonial	1 5	1 3	Over 25 lbs.	1 1½	1 0
Over 50 lbs.	1 4	1 2	Fescue, Fine Leaved	3 4½	3 0
Red, Yates' Finest Imported	1 3	1 1	Over 25 lbs.	3 2½	2 10
Over 50 lbs.	1 1½	1 0	Poa Pratensis	2 1	1 10
White, Yates' Finest	2 1	1 10	Over 25 lbs.	1 11½	1 9
Over 25 lbs.	1 11½	1 9	Poa Nemoralis	4 6	4 0
Alsike, Yates' Finest, Re-Machined	1 4	1 2	Over 25 lbs.	4 5	3 11
Over 25 lbs.	1 3	1 1	Poa Trivialis	2 3	2 0
Trefoil, Yellow (English)	0 9	0 8	Over 25 lbs.	2 2	1 11
Over 25 lbs.	0 8	0 7	Poa Aquatica		
Lotus Corniculatus (Birdsfoot Trefoil)	3 4½	3 0	Over 25lbs.		
Over 25 lbs.	3 3½	2 11	Brown Top (Agrostis Canina)	2 9½	2 6
Lotus Major, Pure Imported, quality			Over 25 lbs.	2 8½	2 5
only fair, due bad harvest	4 6	4 0	Red Top (Agrostis Vulgaris)	1 2½	1 1
Over 25 lbs.	4 5	3 11	Over 25 lbs.	1 1½	1 0
Lotus Major, Local, containing some			Fiorin (Agrostis Stolonifera)	1 9½	1 7
Angustissimus, Best Buying, as is			Over 25 lbs.	1 8½	1 6
better seed	2 10	2 6	Indian Doobj	5 0	4 5
Over 25 lbs.	2 9	2 5	Over 25 lbs.	4 11	4 4
Lotus Hispidus	1 9½	1 7	Tall Oat Grass	2 11	2 7
Over 25 lbs.	1 8½	1 6	Over 25 lbs.	2 10	2 6
Lotus Angustissimus	1 9½	1 7	Yarrow	5 1	4 6
Over 25 lbs.	1 8½	1 6	Yorkshire Fog	0 6	0 5
Crimson (Trifolium Incarnatum)	0 9	0 8	Over 50 lbs.	0 4½	0 4
Over 25 lbs.	0 8	0 7	Sainfoin	1 2	1 0
Lucerne, Yates' Hunter River (true)	2 4	2 1	Sheep's Burnet	1 9	1 6
Over 50 lbs.	2 2	1 11	Sheep's Parsley	2 3	2 0
Lucerne, Yates' Selected Marlborough	1 9½	1 7	Chicory	2 3	2 0
Over 50 lbs.	1 8½	1 6	Turnip—Aberdeen	1 11½	1 9
Lucerne, Best Imported	1 1½	1 0	" White Fleshed		
Over 50 lbs.	1 0½	11	Kale, Thousand Headed—Per lb.	1 8½	1 6
Strawberry (Shelled Seed)			Over 28lbs.	1 5	1 3
Over 25 lbs.			Kale, Buda—Per lb.	2 3	2 0
Subterranean Clover	5 0	4 5	Over 28lbs.	2 0	1 9
Over 25 lbs.	4 10	4 3			
Melilotus Alba	1 5	1 3			
Over 25 lbs.	1 4	1 2			

All the above are freight paid. For Discounts see page 2 of cover.

To Make the Quality Right

AND KNOW IT IS RIGHT

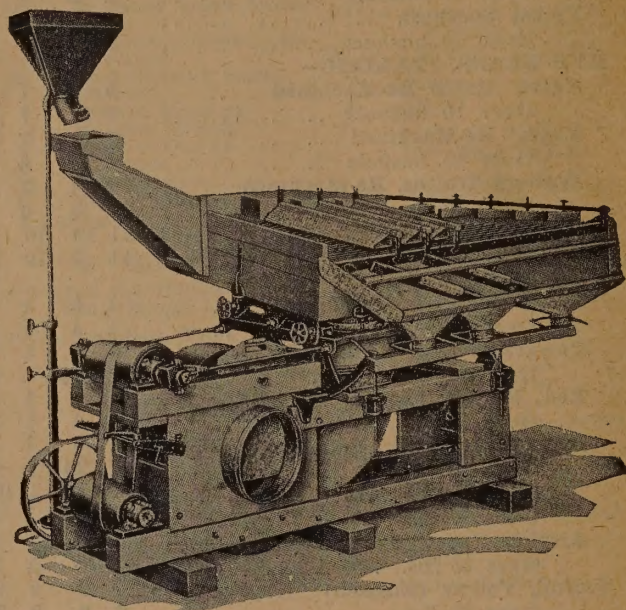
The difference between one sample of seed and another is often far greater than any average layman realises, especially as regards purity, trueness of strain, and germination; if any Seed Merchant was unscrupulous enough or careless enough he could easily take any average farmer down no matter what precaution he took to guard against it. For instance, a ten-thousandth part of some weed seed in a sample would probably not be noticed but it might do untold damage.

Per the medium of a fast and cheap steamship service, seeds are now imported from every civilised country in the world, and consequently, if we did not use every possible care, it would be quite an easy matter to establish in New Zealand every known noxious weed the world possesses. We have already got California Thistle, Dodder, Ragwort, and many other bad weeds in our different districts in New Zealand, through the narrow-minded policy of some farmers buying seeds on price, and not seeing that they got quality first. Unfortunately, many noxious weeds not only spoil the foolish individual farmer's land, but also tend to spread to the neighbouring farm through the medium of wind, water, stock, etc. Fortunately, with the efficient present day cleaning machinery, it is possible to clean practically every known weed seed out of the very many different types of seeds that are sold by Seedsmen. With our very efficient cleaning plant, if we cannot clean a weed out one way, we can nearly always do it by another.

We have just added a wonderful new machine to our already efficient cleaning department; it is called an Air Floating Machine (see photo alongside). This machine which is a new invention (there being only

one other of its kind in Australia or New Zealand, and that is in the South Island) does wonderful work. By means of a forced draught the seed is actually made to float on air. It will take wrinkled peas out of round peas, or shrivelled seed out of good seed, and will actually remove bad growing seed from good growing.

When we are satisfied that a sample of seed is clean, the next question is, "does it grow well and strongly, and is the strain true." The strain question we have already discussed briefly on page nine of this



The above is a photograph of our New Air Floating Machine.



The above photograph shows a corner of our Seed Testing House. We possess the best private Seed Testing Station in New Zealand.

issue. As regards the germination question, there is only one way to know if the growth is alright, and that is by having the most up-to-date testing laboratory possible to solve the many problems of germination that crop up, such as percentage of growth, strength of growth and capacity to hold its growth, etc. We have known seeds to not grow or grow very weakly when received, and yet to grow strongly six months after; we have also known the opposite to be the case; seeds have diseases the same as all living things. The fact is that each different seed, like human beings, has peculiar characters, and to know these are some of a **True Seedsman's Problems**. We have had Turnip Seed which has suddenly dropped its growth from ninety-five per cent. strong, to nothing at all for no apparent reason; it was nice, new, dry seed and looked alright. This disease was infectious; to prove if this was right we mixed some other good growth seed with it, and the germination powers of it died away also.

The only real guarantee of satisfaction a farmer can have is to find out who is the most Reliable Seedsman, and place his confidence in him.

Lucerne



Lucerne Root.

EVERY year this King of Fodder crops increases in popularity. Until lately its great worth as a fodder crop has not been realised, and even now not nearly enough is being sown, for on alluvial flats and ordinary good land there is no other crop to compare with it. The old idea that Lucerne must be sown on rich, alluvial soil has been proved to be wrong, as we now find it being grown extensively on moderately hilly country, but of course the best results are to be obtained on river flats.

Suitable hilly land, if planted with Lucerne, will carry four to six sheep to the acre for the greater part of the year, and on rich river flats an even greater number can be carried. For dairy farmers especially this crop, with moderate attention, will be a real gold mine, and provided that cattle, and particularly dairy cows, which are usually hungry, are not allowed to be on too long, there will be no ill results. Sometimes if allowed to eat too much, they are apt to become blown; this applies mostly to young, succulent Lucerne, damp with rain.

The plant, essentially a deep rooter (see illustration), is eminently suited for droughts and long, dry summers.

As stated previously, Lucerne can be grown practically anywhere, provided that the soil is sweet and contains lime freely. It should be sown 12 lb. to 14 lb. to the acre, using every coulter, in early autumn and late spring, hard frosts being apt to kill the young plants. In about four to five months it will be ready for the first cut, which will, however, not be as heavy as the following ones. We have not room here to fully describe the growing and care of Lucerne, but we have issued a booklet, a copy of which we shall be pleased to forward to anyone intending to grow this crop.

YATES' EXTRA-MACHINED BROAD-LEAVED HUNTER RIVER.—We have the enviable distinction of being, through our Sydney house, the largest dealers of Lucerne in Australasia, and are therefore in a position to offer the genuine Hunter River variety, free from dodder, re-machined by ourselves. This variety has headed the list both at the Ruakura trials in New Zealand, and the Wagga Wagga trials in New South Wales. Customers are warned against buying cheap imported seed, much of which cannot be guaranteed true upright type and free of dodder. The cost of sowing Lucerne is too great to run this risk.



Pigs grazing on Lucerne.

YATES' SELECTED MARLBOROUGH,

being seed specially saved from selected paddocks under our own supervision, so that we can guarantee your getting true, Broad-leaved, upright, unadulterated Marlborough Seed, free of dodder, machined by ourselves. Much of the ordinary Marlborough seed now contains dodder owing to many growers sowing imported seed containing dodder from which seed has now been saved.

An Exceedingly Payable Crop

That needs **no** Attention after Sowing, and is Worth over £300 per Acre in Ten Years

ON our own farm at Waiau Karaka we are just starting to harvest one of the most payable crops that we have ever sown. When we first took up this 4,000 odd acre block there was scarcely a tree on the place and as it was very bleak during 1912 and succeeding years we drilled in through an ordinary seed drill some miles of *Acacia Decurrens Mollissima*,



Specimens of *Acacia Decurrens Mollissima* posts.

making it two drills wide, using every third coulter; in four years time it was over ten feet high and provided excellent shelter; we are now assured of a permanent supply of posts, battens, and firewood, etc.; our farm is divided into about 50 acre paddocks, which means a large number of posts. We started cutting and thinning out the full grown trees last year, and we find that quite a lot of trees are cutting out four posts besides battens and firewood, etc.

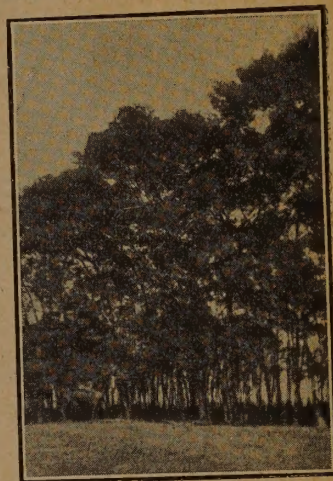
The two top photos show the posts cut out and the shelter belt from which they have been cut in the background; these posts will last over fourteen years in the ground. The total value of the Posts, Battens, and Firewood works out at over £300 per area on the

basis of valuing the posts at £6 per 100, the battens at 12/- per 100, and firewood at 5/- ton; these are fair figures, and at this it is one of the most payable crops we have ever grown.

The two lower photos show shipments of imported timber arriving at Auckland; one is a photograph of one of the shipments of Butter Boxes which were imported last year by The N.Z. Dairy Association from Sweden; the other is a snap of a shipment of telegraph posts being landed at Auckland.

For a young country like New Zealand it is an absolute disgrace to have to go to the other side of the world for our Butter Boxes when we have such a perfect climate in the North Island for the growing of our own. The worst of it is that the present importation is nothing compared with what will have to be imported during the next ten or twenty years for one thing and another.

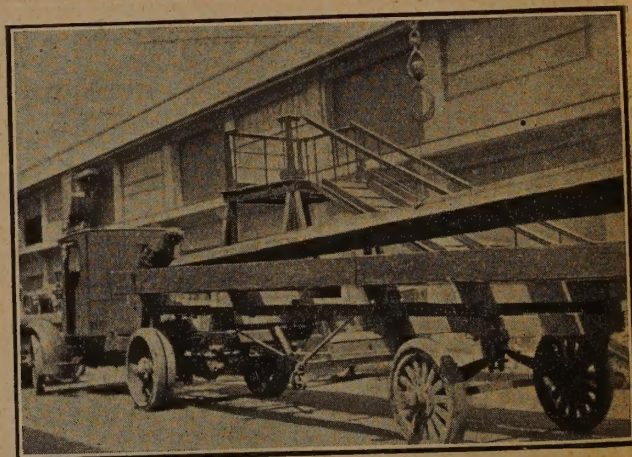
Have you not some rough land that you cannot plough or grass and top-dress, steep knolls and sidings, etc.? What about the corners of your paddocks where you cannot top-dress or cultivate, why not plant them? It will pay you handsomely.



Another view of part of the timber and shelter belt.



Butter Boxes arriving from Sweden for the New Zealand Dairy Association.



Hardwood Telegraph Posts arriving by the ship-load from Australia.

ARTHUR YATES AND CO., LTD.

YATES' Tree Seeds for Shelter, Timber, etc.

Trees can be readily raised from seed sown in the late spring, full directions for sowing being contained in our little pamphlet on Trees for Shelter, etc (post free on application). The following varieties include most of the sorts recommended by the New Zealand Government Forestry Department:—

TREE SEEDS FOR SHELTER AND TIMBER.

	Per oz.	s.	d.
Acacia Decurrens Mollissima , or Tall-growing Black Wattle; the best of the Wattles for post-rails, bark, etc. 5/- lb., 5lb. lots 4/- lb.	0	9	
Acacia dealbata —One of the Silver Wattles that is very hardy, but by its suckering habit is difficult to keep from spreading. 13/6 per lb.	1	0	
Cupressus Lawsoniana —Slower growing, but more permanent than <i>Macrocarpa</i> ; makes a splendid ornamental breakwind. 17/9 per lb.	1	3	
Cupressus Macrocarpa —Forms quick, efficient shelter; timber durable in contact with the ground; one of the best for growing near the sea coast. 9/- per lb.	0	9	
Eucalyptus or Gums —Each 2/6 per oz., 35/6 per lb., post paid.			
E. Obliqua —Quick, large-growing and hardy, except where frosts are frequent and heavy; valuable for timber.			
E. Eugenioides —Does well in Waikato, but unsuitable for high inland localities; valuable for timber, and durable in ground.			
E. Viminalis —Rapid and tall-growing, hardy, transplanting readily; a timber tree moderately durable in ground.			
E. Macarthurii —Now well known, fast growing, hardy, transplants easily; suitable for temperate localities; timber very durable in ground.			
E. Gunnii —Very hardy; timber hard and heavy.			
E. Fastigata —Rapid, tall and hardy; timber valuable for building, but not durable in ground.			
E. Pilularis —Large growing; suitable for warmer districts of North Auckland; timber very durable.			
Also usually in stock— <i>E. Rostrata</i> , <i>Paniculata</i> , <i>Tericornis</i> , <i>Sideroxylon</i> , <i>Creba</i> , <i>Marginata</i> , <i>Robusta</i> , and <i>Capitellata</i> .			
Pinus Radiata (Insignis) —Very rapid grower, and produces good timber for butter boxes, etc., after 30 to 40 years. 9/- per lb.	0	9	
Pinus Muricata —Slower growing than the former, but of very dense habit; makes a good orchard shelter	1	6	
Pinus Canariensis (Canary Island Pine)	1	0	
Pinus Maritima , or <i>Pinaster</i> (Cluster Pine) 11/- lb.	0	9	

TREE SEEDS FOR SHELTER AND ORNAMENT.

	Per packet	s.	d.
Acacia Baileyana (Cootamundra Wattle) 1/6 oz.	0	6	
Acacia Pycnantha , or Golden Wattle 1/- oz.	0	6	
Acacia Normalis , graceful fern-like foliage 9d. oz.	0	6	
E. Citroidora , or Lemon-scented Gum	0	6	
E. Ficifolia , or Scarlet Flowering Gum	1	0	
E. Amygdalina	0	6	
E. Coriacea	0	6	
E. Corymbosa	0	6	
E. Corynocalyx , Sugar Gum	0	6	
E. Haemastoma	0	6	
E. Meliodora	0	6	
E. Sieberiana	0	6	
E. Stuartiana	0	6	



HEDGE SEEDS.

	Per oz.	s.	d.
Acacia Verticillata —A dense growing, hardy, prickly variety that affords shelter right to the ground. 5lb. lots 7/8 lb., 8/- lb.	1	0	
Albizzia Lopantha —The quickest growing hedge, lasting 6 to 8 years; will not stand severe frosts. 10lb. lots 1/6 lb., 2/- lb., 1/3 1/4 lb.	0	6	
African Boxthorn —Suitable for sandy districts near the sea coast	1	0	
Acacia Decurrens Mollissima —Stands where <i>Albizzia</i> fails; quick growing head back when 4ft. to 6ft. high. 5lb. lots 4/- lb., 5/- lb.	0	9	
Berberis Vulgaris , or Prickly Barberry. 9/- lb.	0	9	
Cupressus Macrocarpa —Does well near the sea coast. 9/- lb.	0	9	
Cupressus Lawsoniana —Slow growing, but permanent. 17/9 lb.	1	3	
Robinia , or Pseudo <i>Acacia</i> , or White Prickly <i>Acacia</i> ; hardy, but suckers; therefore annual ploughing near hedge advisable. 9/- lb.	0	9	
Tree Lucerne (Tagasaste) —Quickest and hardest temporary hedge, lasting 8 to 10 years. 5lb. lots 4/- lb., 5/- lb.	0	9	

During the winter we can supply plants of the leading varieties of shelter and hedge trees, and for full particulars and prices see our Nursery Catalogue, issued in May.

Seed Potatoes

Yates' Epicure

A Marvel in Earliness! A Marvel in Yield!

It is not only early, but produces its crop in great abundance, and yields a very large percentage of perfectly formed tubers. We strongly recommend every planter to try this. The skin is unusually attractive; being a creamy-buff. In shape it is round, and grows noticeably uniform, which is one of its strong points. Flesh pearly white and fine-grained, so cooks dry and floury. Undoubtedly one of the earliest Potatoes in cultivation. We can with every confidence recommend it.

Prices:

cwt.	56lb.	28lb.	14lb.	7lb.
20/-	11/-	6/-	3/3	1/9

FIRST EARLY VARIETIES.

Beauty of Hebron, White—A white-skinned, white-flesh potato of first-class quality, especially suitable for light soil, and a good cropper for an early variety

Beauty of Hebron, Pink—A splendid potato for light soils, being a heavy cropper and of good quality

Early Puritan—A very early, heavy cropping variety, producing tubers of an admirable shape. It is of excellent quality when cooked

Early Rose—A well-known pink-skinned potato, cropping well, and of good quality

Robin Adair—A splendid red-skinned, early kidney-shaped potato; a good variety for the private garden. It is of handsome appearance, a good cropper, and the table qualities are all that can be desired

Supreme—A most productive early variety. The tubers are of handsome appearance, with eyes well up to the surface, and for quality cannot be surpassed

Per cwt.	56 lbs.	28 lbs.	14 lbs.
15/6	8/3	4/6	2/6
15/6	8/3	4/6	2/6
12/6	7/-	3/9	2/3
15/6	8/3	4/6	2/6
15/-	8/-	4/6	2/6
15/-	8/-	4/6	2/6

SECOND EARLY VARIETIES.

British Queen—One of the best second earliest, very prolific, and altogether a most popular variety

Early Regent—A very productive variety and good keeper. The flesh is firm and white. When cooked, it is floury and of excellent quality

Gold Coin—A good white-skinned and white-flesh type that has done well in the Auckland district, resisting blight, cropping well, and coming in fairly early

New Era—A second early variety of wonderful productiveness, and a great blight resister, extensively grown in some districts for market; round in shape, white-skinned; cooks perfectly white, dry and floury

White Elephant—A somewhat irregular shaped round variety, cropping very heavily, and of first-class quality

Yates' Russett—A red-skinned variety of good quality. In our trials these showed first-class results in quality and quantity, and resisted blight better even than Northern Star and Gamekeepers. Thoroughly recommended

12/-	6/6	3/6	2/-
15/-	8/-	4/6	2/6
16/-	8/6	4/9	2/9
14/-	7/6	4/-	2/3
12/-	6/6	3/6	2/-
10/-	5/3	2/9	1/9

Prices quoted less 10 per cent. cash with order, or 5 per cent. cash in month, delivered f.o.b. or f.o.r. Auckland, subject to sales and market fluctuations. After September or the early part of October we are usually "sold out" of most varieties. Bags extra in lots of less than one sack. SPECIAL QUOTATIONS ALWAYS GIVEN FOR TON LOTS. Lower Rates will be charged for samples unpicked if customers care to have them supplied as received by us from the grower.

It is always advisable to turn potatoes out of the bags immediately they are received, as they will not keep well when closely bagged.

ARTHUR YATES AND CO., LTD.

Seed Potatoes

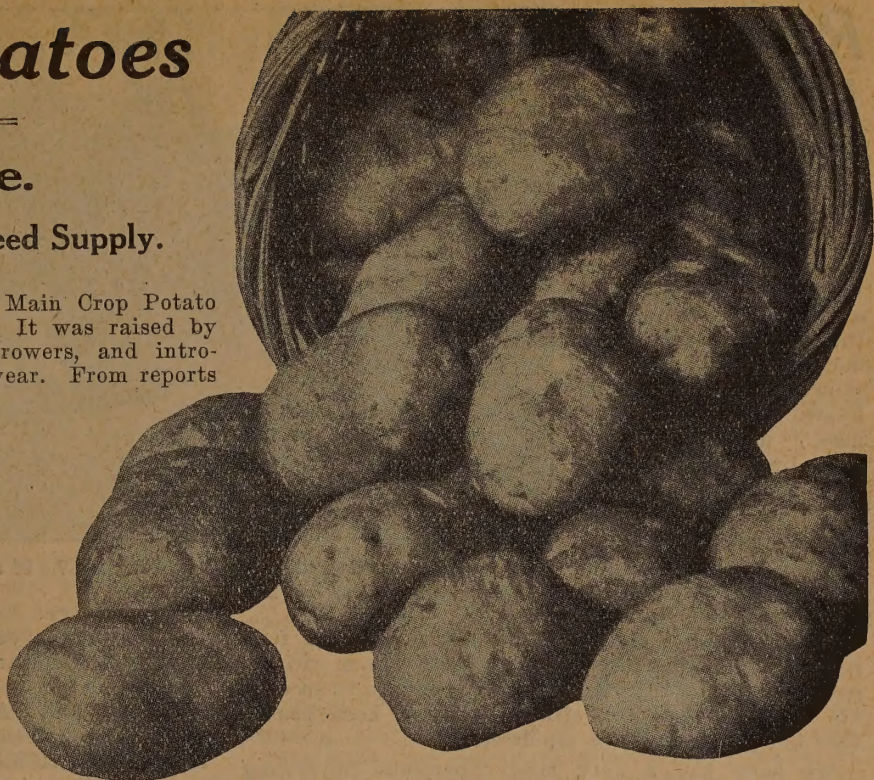
Iron Duke.

Demand is Sure to Exceed Supply.

THE demand for this splendid Main Crop Potato is sure to exceed the supply. It was raised by one of Scotland's foremost growers, and introduced to New Zealand by us last year. From reports received, it has proved a great success, and seems to do well on any soil. The vines are strong and vigorous; it is wonderfully productive; in fact, the tubers lie so closely together, that they almost touch each other in the hills. The flesh of this wonderful keeper cooks floury and white.

Prices:

cwt.	56lb.	28lb.	14lb.	7lb.
20/-	11/-	6/-	3/3	1/9



MAIN CROP AND LATE VARIETIES.

	Per cwt.	56 lbs.	28 lbs.	14 lbs.
Aberbrothock —A large, round, main crop variety, good yielder and blight-resister; does well on any soil; cooks and keeps well	18/-	10/-	5/6	3/-
Arran Chief —This splendid potato has forced its way to the front with market and private growers. It is a main crop variety. It can be cultivated easier than any other variety because of its habit of setting its entire crop close in the hill. It is also easily dug. A good cooker and keeper	11/6	6/3	3/3	1/9
Breese's Prolific —A disease-resister of prime quality, cropping well, with white-skinned pebble-shaped tubers	10/6	5/6	3/-	1/9
Dakota Red —Produces a very heavy crop of large, red-skinned potatoes. A leading sort in some districts. A good blight-resister	11/6	6/3	3/3	1/9
Gamekeeper —The standard variety with market growers. A most excellent late potato, doing remarkably well on any soil. Undoubtedly the best blight-resister grown; wonderfully productive, and keeps as well as any potato grown—				
Southern-Grown Seed	10/-	5/3	2/9	1/9
Pukekohe Autumn-Grown Seed	12/6	7/-	3/9	2/3
King Edward VII. —A heavy cropping variety, producing handsome tubers marked with a pinkish blotch about the eyes. Valuable for exhibition	14/-	7/6	4/-	2/3
Maori Chief —Round, main crop, mottled blue and white; keeps well and crops heavily; headed the N.Z. Government test for heaviest yielder; blight-resisting, and of good quality	10/6	5/6	3/3	1/9
Northern Star, Southern —Best blight-resisting main crop, heavy cropper	10/-	5/3	2/9	1/9
Northern Star, Pukekohe —Autumn-Grown	12/6	7/-	3/9	2/3
Sir J. G. Wilson (Late) —A round blue skin potato of considerable merit. A strong grower, heavy cropper, and stands the blight as well as any other potato. Very fine for exhibition	14/-	7/6	4/-	2/3
Up-to-Date —The well-known white-skinned cropping variety; still maintains its position of one of the best potatoes on the market	12/6	7/-	3/9	2/3

Prices quoted less 10 per cent. cash with order, or 5 per cent. cash in month, delivered f.o.b. or f.o.r. Auckland, subject to sales and market fluctuations. After September or the early part of October we are usually "sold out" of most varieties. Bags extra in lots of less than one sack. **SPECIAL QUOTATIONS ALWAYS GIVEN FOR TON LOTS.** Lower Rates will be charged for samples unpicked if customers care to have them supplied as received by us from the grower.

It is always advisable to turn potatoes out of the bags immediately they are received, as they will not keep well when closely bagged.

LOWER ALBERT STREET, AUCKLAND.

Reliable Manures

The soil in many parts of New Zealand is deficient in some mineral element, that will make the stock either waste away or keep them practically at a standstill, thus wasting the farmer's time and money. This state is shown in the complaint known as "bush sickness," which has been proved to be caused by a deficiency of phosphates and iron. A noted authority has said that "the greatest factor in increasing production consists of adequate top-dressing, as an increase of one ton of pasture feed represents an increase of somewhere about twenty pounds of butter-fat per acre. The profits to be secured are so great, that it is strange that the keen farmer does not go in for more top-dressing."

We have had a very long experience in mixing Manure for special crops, having had the advantage of practically testing various combinations of Manures upon the crops and pastures of our own Seed Farms. The mixtures, therefore, that we send out under the brand of A.Y. are the result of this practical experience, and we unhesitatingly claim that nothing better is offered to the farming community at the present time.

Farmers can rely upon these mixtures being properly balanced as regards the essential requirements of each individual crop. They are mostly made up in bags, 16 or 12 to the ton, each bag being stenciled with our name and address, and are offered, delivered either free on rails or steamer Auckland, subject to sales and market fluctuations.

A.Y. SUPERPHOSPHATE.

A most valuable fertilizer, made by dissolving Nauru or other high grade ground Rock Phosphate with Sulphuric Acid, making it soluble in water, and therefore quick acting. The particles of Phosphate as dissolved by the rain water are carried into the soil, where the lime present neutralises the acid and reverts the phosphate to a less soluble form, which the plant roots act on and absorb. If lime is absent and the soil sour, this reversion does not take place, and the "super" has the effect of making it more sour. In such a case Basic Super or one of our special manures would be more suitable. Superphosphate is now only made in two grades, and with a view of getting the most units of phosphate for the money necessary to cover freight, cartage and spreading, we recommend the higher grade.

A.Y. BASIC SUPER.

This is Superphosphate with the acid neutralised by the addition of quick-lime, etc. The reverted phosphate resulting has much the same effect on a pasture as



Have you top-dressed your hay paddock yet? If not, the sooner it is done the better.

the application of Basic Slag; it is drier and more friable than Super., and easily drilled, and is a useful manure.

A.Y. BASIC SLAG.

We have arriving at intervals during the season shipments of this valuable Phosphatic Manure. The quality will be in every way satisfactory, both as regards analysis and fineness, being a high-grade 17/20 per cent. slag.

EPHOS. BASIC PHOSPHATE.

Can be used with advantage on all soils, but its effects are most marked on soils rich in organic matter (vegetable matter) and poor in lime.

NAURU AND OCEAN ISLAND GROUND ROCK PHOSPHATE.

These are about the richest Rock Phosphates known, containing 80 to 83 per cent. of Phosphate of Lime. They are, however, slow in action, particularly on sweet land; on this account, we do not recommend their use alone, but a mixture of one-third Nauru and two-thirds Super., or even half and half, would be good—we would do such mixing for 3/6 per ton extra.

YATES' A.Y. CALCUTTA STEAMED BONE DUST.

We offer the **CALCUTTA AND SYDNEY BONE DUST**, the former being of the highest quality and analysis. Our last shipment contains 4½ per cent. nitrogen and 54½ per cent. phosphate of lime. We can strongly recommend it for any crop, being exceptionally high in both Phosphate and Ammonia, in good condition, and thoroughly steamed.

WALPOLE GUANO.

An alluvial Guano in a very fine powdery condition. The analysis is about 56 per cent. Phosphate of Lime, and we recommend it as suitable for using in conjunction with Superphosphate, Bonedust, etc.

A.Y. SULPHATE OF IRON.

This is now being used in large quantities for the top-dressing of lands suffering from "Bush Sickness" as it is commonly called; as there is generally a heavy freight to pay to these districts, it is most economical to use only the highest grade, which ours is.

A. Y. Special Manures

YATES' A.Y. BONEDUST AND BLOOD.

A most excellent and genuine Manure, being very rich in Ammonia; in fact, it is almost too rich to use by itself, but it is well adapted for mixing with Superphosphate, etc. It contains 20 per cent. Phosphate of Lime and 8 per cent. of Ammonia, and is guaranteed under the "Fertilizers Act, 1904," to contain 7.5 per cent. P2O5 and 4 per cent. NH3. There are lower grades on the market at lower prices.

A.Y. TOP-DRESSING MANURE.

A mixture admirably adapted for renovating worn-out paddocks. A dressing of this fertilizer has a wonderful effect, as it replaces those ingredients which have been absorbed and used by the grass, thus giving new life to the pasture. Strongly recommended as producing far better results than Bonedust, etc., alone; it has an immediate and lasting effect.

A.Y. GRASS MANURE.

Specially prepared for sowing with grass seed, and strongly recommended in preference to Bonedust, Basic Super, etc., which, singly, do not contain all the fertilizing properties of a perfect Manure. This mixture contains all the elements necessary for the growth of a rich mixed pasture, being quick in action, yet lasting well, supplying the grasses and clovers with the essential nitrogen, phosphate, and potash.

A.Y. CLOVER MANURE.

A special mixture for leguminous plants, such as Clover, Peas, Beans, etc., which require a large proportion of Phosphate to obtain the best results.

A.Y. RAPE MANURE.

A mixture, containing all the essential ingredients for this well-known and valuable crop. Our sales of this Manure have greatly increased during the past year.

A.Y. POTATO MANURE.

It is a perfect Potato Manure, the actual analysis containing 28 per cent. of Phosphate of Lime (7 per cent. soluble), and 2 per cent. Ammonia.

NITRATE OF SODA.

(95-96 per cent.)

The quickest form of Ammoniacal Manures, being readily soluble in water; invaluable for forcing growth of Strawberries and garden crops in the spring.

SULPHATE OF AMMONIA.

A slower-acting Ammoniacal Manure, preferred by some as it is not so exhaustive in its action.

SULPHATE OF POTASH.

Contains 90 to 95 per cent. Potash, being valuable for increasing the quality of all crops, especially Fruits, Root Crops, Potatoes, etc.

20 PER CENT. & 30 PER CENT. POTASH.

These are very similar in their contents and action to Sulphate of Potash, but they only contain 20 and 30 per cent. K_2SO_4 respectively as against over 90 per cent. in Sulphate of Potash.

A.Y. TURNIP MANURE.

A first-class fertilizer, and the best to use for Turnip crops, giving strength and vigour, and besides giving a heavy yield it leaves the soil in splendid heart for the following crop.

A.Y. OAT MANURE.

The best Manure for this important crop, providing it with the necessary Phosphate, whilst containing sufficient Ammonia to promote a strong, vigorous growth.

A.Y. ROOT MANURE FOR MANGOLDS, ETC.

Made up with the object of providing the essential constituents that such crops require to produce roots which contain a high analysis of saccharine. This manure has given some splendid returns, and is recommended with every confidence.

A.Y. ONION MANURE.

A complete fertilizer for this particular purpose, and which is recommended as containing the essential elements in proper proportions necessary for the production of a heavy yield of good quality Onion Bulbs.

A.Y. ORCHARD MANURE.

Expressly made up with a view to the fruit-bearing capacity that is the aim of every orchardist, whilst at the same time containing sufficient Nitrogen to promote healthy growth that enables the trees to better resist disease. Is rich and lasting.

A.Y. MAIZE MANURE.

A splendid fertilizer for all forage crops, as Maize, Sorghum, Millet, etc. Produces strong, healthy foliage of that deep green colour so much desired in such crops. High in Phosphates and Ammonia.

KAINIT OR 14 PER CENT. POTASH.

This is largely used for sowing with Mangolds which need a lot of Salt; in conjunction with Potash, Kainit contains a large percentage of Salt.



Clover Top-dressed with A.Y. Clover Manure.

Mixing Manures

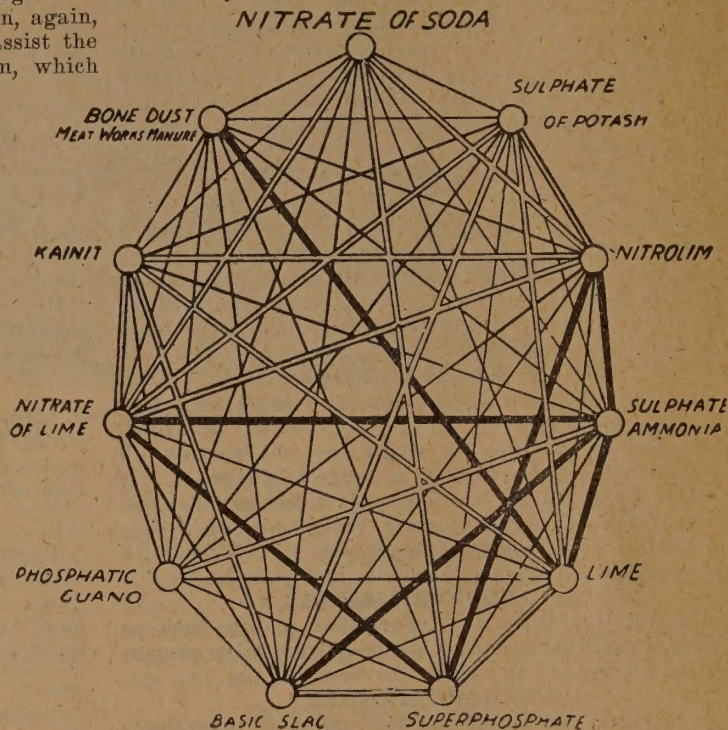
OWING to the varied chemical composition of Fertilizers, caution must be observed in mixing different kinds together, as some act against one another, dissipating values or rendering the mixture lumpy or sticky. Some manures can be mixed together without any harmful effects resulting; others can be mixed only a little while before using; and then, again, some must not be mixed together at all. To assist the farmer in this, we have drawn up a diagram, which explains this fully.

Explanation of Diagram

Connected by a light single line.—
Can be mixed together, and kept for any time.

Connected by a light double line.—
Should only be mixed together a little time before using, and not kept long.

Connected by a heavy dark line.—
Should never be mixed together.



TWO MOTTOES.

1. Top-dress often and well.
2. Buy only the Highest Quality Manures.

These facts are at last getting properly recognised.



Remarkable effect of Manure on Mangolds. Only the two inner rows are manured.

Green Manuring

HUMUS, or rotted vegetable matter, is the life of the soil. Without it the soil is nothing but rock powder. It is useless to inject concentrated feed into a lifeless body. Organic matter acts like a sponge, in that it shrinks and expands in wetting and drying, and conserves moisture and holds heat. It holds fine particles apart, making a friable, loamy soil that will not cake.

Fertile soils simply teem with minute organisms or bacteria which are constantly at work, causing changes in the soil which influence plant growth one way or another. The activity of these organisms is largely affected by the temperature and amount of moisture and organic matter present. The class of plant grown also has a marked influence. Thus all leguminous plants—peas, beans, vetches, lucerne, etc.—are very favourable to the growth of organisms, colonies of which develop in the nodules found on their roots. These particular organisms collect Nitrogen, and so enrich the soil. They will convert a mineral from an unavailable form into a form that the plant may use.



Lupins in Flower.

HUMUS ESSENTIAL TO GOOD SOIL.

BECAUSE—

1. Enlivens the soil.
2. Encourages bacteria.
3. Admits air and water into the soil.

4. Retains moisture.
5. Keeps soil loose and warm.
5. Makes the soil more productive. Prevents washing and caking.

WATER HOLDING CAPACITY.

100lb. Sand will hold 25lb. Water.

100lb. Clay will hold 50lb. Water.

100lb. Humus will hold 190lb. Water.

There are many Green Manure crops, but the recognised ones are: Lupins, Mustard, Peas, Oats, Red Clover and Italian Ryegrass. A green crop is equal to a dressing of stable manure, with the advantage that it is already spread. When artificial fertilizers have to be carted a long way, a considerable amount is added to the cost, making top-dressing, which should be done annually to get the most out of the land, prohibitive. There, Green Manuring, with, perhaps, the application of some Phosphatic Manure, will be one of the cheapest ways of making poor soil rich.

Yates' Farm Seed Sowers' Chart

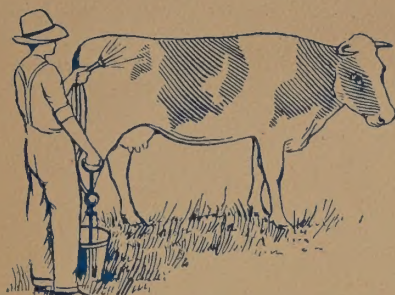
The information given below is as accurate as can be gathered, allowing for the different ways of planting and the varying distances practised by growers. The usual distances are here given, and each individual must use his own judgment for his particular case. The New Zealand Government Department of Agriculture's Experts have been consulted, and have helped us in the compiling of this chart. So far as we know, this is the only complete chart for New Zealand conditions, and therefore should be worth keeping.

	Fair Average Return per acre Good Land for Purpose Grown.	Quantity Seed Required per acre.	Quantity of Manure required per acre of average land.	Time to Sow in Auckland District.	Distance Rows Apart.	Crop Ready in about
Artichoke, Jer. (for Winter)	20 to 40 tons tubers	10 cwt. tubers	4 cwt. A.Y. Potato Manure	Early Spring	3 feet	9 months
Barley, Cape and Skinless (for Fodder)	2 to 3 times fed off	2 to 3 bus. ea. 50lbs.	3 cwt. A.Y. Oat Manure	Spring and Autumn	Every coulter	2 months
Beet, Sugar (Roots for Winter use)	20 to 40 tons roots	5 to 6 lbs.	5 cwt. A.Y. Root Manure	Spring	28 inches apart	8 months
Buckwheat (for Grain)	25 to 40 bus., for poultry	1½ bus. each 50 lbs.	3 cwt. A.Y. Oat Manure	Spring	Every other coulter	4 months
Carrot, Field (for Winter use)	20 to 40 tons roots	3 to 4 lbs.	3 cwt. A.Y. Root Manure	Spring	28 inches apart	6 months
Cabbage, Cattle (for Green Fodder)	30 to 40 tons fodder	12 oz. transplanted	5 cwt. A.Y. Turnip Manure	Spring or Autumn	2½ feet	5 to 6 months
Chou Mollier (for Green Fodder)	30 to 50 tons fodder	1½ to 2 lbs.	3 to 5 cwt. A.Y. Rape Man.	Spring	28 inches apart	4 to 5 months
Clover, Red, with Top Dressing	Good heavy pasture	3 to 7 lbs.	2 to 4 cwt. A.Y. Top Dress.	Spring	Broadcast	..
Clover, White, with Top Dressing	Good heavy pasture	2 lbs.	2 to 4 cwt. A.Y. Top Dress.	Spring	Broadcast	..
Gums, Euc. (for Shelter or Timber)	Good heavy pasture	½ lb. in beds	..	Late Spring	6 feet apart	..
Grass, Mixed Burn (for Pasture)	Good heavy pasture	25 to 30 lbs.	..	Autumn	Broadcast	..
Grass, Ploughed Land	Good heavy pasture	35 to 45 lbs.	2 to 4 cwt. A.Y. Grass Manure	Spring and Autumn	Every coulter or broadcast	8 to 10 weeks
Kale, Thousand-Headed	20 to 40 tons green feed	1½ to 2 lbs.	3 to 5 cwt. A.Y. Rape Man.	Spring	Every other coulter	4 to 5 months
Kumi Kumi (for Winter Feed)	30 to 50 tons marrows	4 to 6 lbs.	3 to 5 cwt. A.Y. Maize M.	Late Spring	6 feet	4 to 5 months
Lawn Grass	A good lawn	3 lbs. 100 sq. yds.	..	Spring or Autumn	Broadcast	..
Lupins (for Green Manure)	Heavy crop	2 to 2½ bush. each 60lbs.	2 to 3 cwt. A.Y. Clover M.	Spring and Autumn	Every coulter	3 to 5 months
Lucerne (Hay or Green Fodder)	3 to 5 cuts, or feed off	12 to 16 lbs.	3 to 5 cwt. A.Y. Clover M.	Spring or Autumn	Every coulter	5 months
Linseed (for Seed)	8 to 12 cwt, seed	30 to 60 lbs.	3 cwt. A.Y. Oat Manure	Spring	Every coulter	4 months
Maize (for Grain)	50 to 80 bushels	15 to 20 lbs.	2 to 4 cwt. A.Y. Maize M.	Late Spring	3 feet	7 months
Maize (for Summer Green Fodder)	50 to 85 tons green feed	2½ to 3 bus. ea. 56lb.	3 to 5 cwt. A.Y. Maize M.	Late Spring	Every other coulter	3 months
Mangold (Roots for Winter)	40 to 70 tons roots	5 to 6 lbs.	5 to 10 cwt. A.Y. Root M.	Late Spring	28 inches apart	6 to 8 months
Millet (for Summer Green Feed)	2 to 4 times fed off	14 to 20 lbs.	3 to 5 cwt. A.Y. Maize M.	Spring	Every coulter	6 to 8 weeks
Mustard (for Green Feed)	15 to 25 tons green feed	7 to 12 lbs.	3 to 5 cwt. A.Y. Rape M.	All year round	Every coulter	6 to 8 weeks
Marrow, Cattle (for Aut. & Win.)	30 to 50 tons marrows	4 to 6 lbs.	3 to 5 cwt. A.Y. Maize M.	Late Spring	6 feet	4 to 5 months
Oats (for Green Feed)	2 to 3 times fed off	2 to 3 bus. ea. 40lbs.	3 cwt. A.Y. Oat Manure	Spring and Autumn	Every coulter	6 to 8 weeks
Oats (for Grain)	25 to 40 bushels	2 to 3 bus. ea. 40lbs.	3 cwt. A.Y. Oat Manure	Spring and Autumn	Every coulter	4 to 5 months
Prairie Grass (Quick-growing Pasture)	Cut every 5 or 6 weeks	2½ to 3 bus. each 20 lbs.	2 to 3 cwt. A.Y. Grass Manure	Spring and Autumn	Disced in	3 months
Peas (for Summer Fodder)	Valuable fodder crop	2½ to 3½ bus., 60lbs.	2 to 4 cwt. A.Y. Pea M.	Spring and Autumn	Every coulter	3 to 4 months
Peas (for Green Manuring)	Heavy crop green manure	3 to 4 bus. ea. 60lbs.	2 to 4 cwt. A.Y. Pea M.	Spring and Autumn	Every coulter	3 to 4 months
Pumpkins (for Winter Feed)	40 to 60 tons	4 to 6 lbs.	3 to 5 cwt. A.Y. Maize M.	Late Spring	6 feet apart	7 months
Potatoes (for Table)	8 to 12 tons tubers	10 to 15 cwt.	8 to 12 cwt. A.Y. Potato Manure	Spring	30 inches	4 to 5 months
Rape (for Summer Feed)	25 to 40 tons green feed	2 to 3 lbs.	3 to 5 cwt. A.Y. Rape M.	Spring or Autumn	Every coulter	3 to 4 months
Rye-corn (for Green Feed)	2 or 3 times fed off	2 to 3 bus. ea. 60lbs.	3 cwt. A.Y. Oat Manure	Spring or Autumn	Every coulter	4 months
Sorghums (for Autumn Feed)	30 to 40 tons	14 to 20 lbs.	3 to 5 cwt. A.Y. Maize M.	Late Spring	Every coulter	4 months
Sudan Grass (for Summer and Autumn Feed)	2 or 3 times fed off	14 to 20 lbs.	2 to 4 cwt. A.Y. Maize M.	Late Spring	Every coulter	4 months
Swede (for Winter Feed)	25 to 35 tons	12 to 15 ozs.	3 to 5 cwt. A.Y. Turnip M.	November to Jan.	Every other coulter	5 to 6 months
Tares with Grain (Hay or Fodder)	Feed off	1 to 1½ bus.	3 to 5 cwt. A.Y. Oat M.	Spring or Autumn	Every coulter	3 to 4 months
Turnip, Soft (as catch crop)	15 to 25 tons feed	12 to 15 ozs.	3 to 5 cwt. A.Y. Turnip M.	All year round	Every other coulter	3 months
Turnip, Aberdeen (as catch crop)	15 to 25 tons feed	12 to 15 ozs.	3 to 5 cwt. A.Y. Turnip M.	Spr., Sum., Aut.	Every other coulter	4 months
Wattle or Acacia (for Hedges and Shelter)	15 to 20 feet, 2 years	1 oz. sows 1 chain, single rows	..	Spring	..	..
Wheat (for Fowl Feed)	25 to 35 bushels	2½ to 3 bus. ea. 60lb.	2 to 4 cwt. A.Y. Oat Man.	Spring	Every coulter	6 to 7 months

Spraying Pumps

Bucket Spray Pump

An everyday necessity on the farm.



Applying Tick Eradicator.

Few farmers realise the multitude of purposes for which a pump may be used on the farm; following is a list of the everyday uses where the pump is an improvement on any other method of doing the work:—

Whitewashing poultry-houses, barns, cellars, fences, etc.

Spraying stagnant pools to kill mosquitoes and prevent them spreading disease.

Deodorizing and purifying dairy rooms.

Disinfecting barns, poultry-houses, stock-pens, etc.

Protection against incipient fires.

Washing buggies, automobiles, windows, etc.

Disinfecting schools, public buildings, etc.

FOR APPLYING CATTLE TICK ERADICATOR.

Spraying cattle takes about a tenth of the time and does the work of eradicating the cattle tick more thoroughly than any other method.



The "Crescent" Bucket Pump

35/-

or
Nett Cash

31/6

Postage,
2/3 extra.

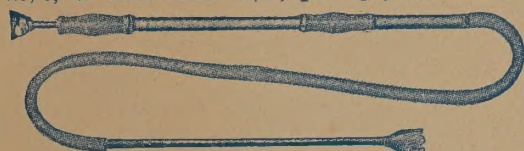
"Success"

40/-, or 35/- net cash
(without bucket).

Auto Spray No. 5 Pump

IT'S DOUBLE ACTING.

27/6, or nett cash 24/9; postage, 1/6 extra.



THE SAME SPRAY WITH HALF THE LABOUR.

This Pump is made entirely of brass. It has two ball valves so arranged that they may be instantly cleaned. Pump is double-acting, and will generate a pressure of 180 lbs.

A curved extension is extra and is very useful for spraying field crops, so that the operator can direct the spray up or down while using the pump in a horizontal position.

A galvanized iron knapsack tank attachment is also extra, and is essential where the sprayer has to be continually moved about, such as spraying rows of potatoes, etc.

Prices (Carriage extra).

Auto Spray Pump, Hose, Nozzle and Strainer complete—27/6; 24/9 cash.

Curved Extension—4/-; 3/8 cash.

Straight Extension—4/-; 3/8 cash.

Galvanized Iron Reservoir, enabling pump to be used as a knapsack—15/-; 13/6 cash.

Auto Spray No. 1

COMPRESSED AIR PUMP.

70/-; nett cash, 63/-; carriage extra.



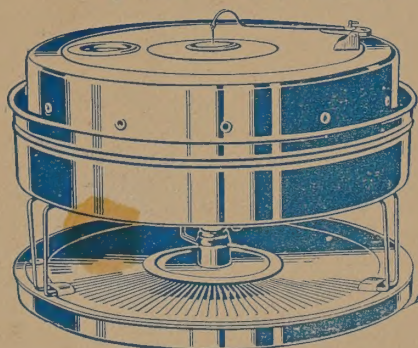
CONSTRUCTION: It consists of a solution tank holding about four gallons, made of heavy sheet brass that will not corrode with strong solutions.

A brass air pump is located inside the solution tank protected from injury. The valves and washers resist oil and other solutions that attack rubber.

TO OPERATE: Remove pump with a half turn, fill tank two-thirds full of solution, replace pump, and with a few strokes compress air on solution. Then direct the spray.

Two pumpings will discharge contents.

"Cycle" Hatchers (Metal)



This 50-egg "Cycle" Hatcher is the logical size and style machine for poultry in connection with other work.

Price:

£3/18/- Booked,

or

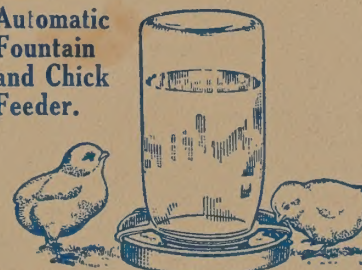
£3/10/- Net Cash.

Automatic Fountain and Chick Feeder.

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GARDEN ANNUAL,

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Feeds, water, grain, grit, etc., automatically. Made to fit half-gallon, quart, or pint Mason Jar.

Without Jar ... 2/-
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YATES' HALF SUGAR
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YATES' SELECTED
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